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Manufacturers Record

Exponent of America

DECEMBER 16, 1920

Volume LXXVIII

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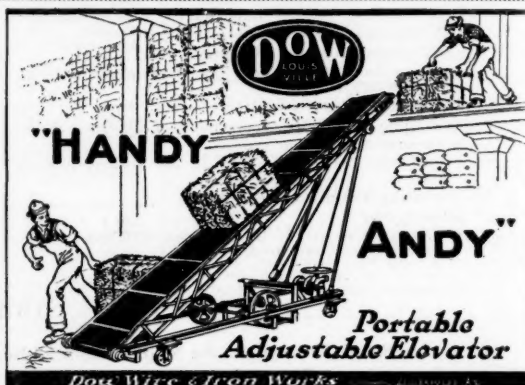
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Manufacturers Record

EXPONENT OF AMERICA

Devoted to the Upbuilding of the Nation Through the Development of the South and Southwest as the Nation's Greatest Material Asset

Trade-Name Registered in the U. S. Patent Office

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WEEKLY

BALTIMORE, DECEMBER 16, 1920

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SENATE OVERWHELMINGLY ENDORSES THE FIGHT WAGED BY THE MANUFACTURERS RECORD.

THE Senate, without a record vote, has endorsed the position taken by the MANUFACTURERS RECORD in the long months during which we have endeavored to prevent the full accomplishment of the ruinous and destructive policies advocated and put into operation by Secretary of the Treasury Houston and the Federal Reserve Board.

The rebuke to Secretary Houston is particularly pronounced. He is formally directed by the Senate resolution to rehabilitate the War Finance Corporation at once.

Rarely in American history has a member of the Cabinet been so utterly repudiated by the legislative branch. It was inevitable, because what Secretary Houston had sought to do was veto a statutory policy. He was able temporarily to do so because of certain technical privileges and powers he possessed, but it required but seven days of the Senate in session to order a reversal of the Houston policy.

The Senate, although desiring to do so, hesitated formally to instruct the Federal Reserve Board as to rates of rediscount, etc. It contented itself with declaring that "it is the opinion of Congress that the Federal Reserve Board should take such action as may be necessary to permit the member banks of the Federal Reserve System to grant liberal extensions of credit to the farmers of the country upon the security of the agricultural products now held by them by permitting the rediscounting of such notes of extension at a fair and reasonable rate of interest."

The Senate of the United States has thus endorsed the salient things for which the MANUFACTURERS RECORD has been fighting. There would seem to be nothing left for Secretary Houston but resignation.

"Sell" Prosperity to the Country

WHEN the panic of 1907 was at its height the most successful publisher in America gathered about him his directors, his editors and his heads of departments, and they consulted together as to how best they might meet the exigent situation. One department head explained how many thousand dollars he could save by this economy and that, and another added his story of the same kind. Then it came to the editors, and one of them proudly announced that he could save even more than the aggregate of the sums named by his department heads, and another editor named a great sum, probably a quarter of a million, which he could get along without. So the directors, one after another, entered their approval and became quite jubilant, in fact, over the possibility of saving disclosed. It would appear, they thought, that losses could be avoided.

But the most successful publisher in America listened quietly as each told his tale. He never spoke his thought until they all were through. But when he did speak, in one dramatic moment he made it crystal clear why he was the most successful publisher in America. There was a twinkle in the shrewd man's eye as he said: "You, one and all, have told me how we can save money. I thank you. We might quit publication entirely and make a 100 per cent saving. But what we are here for is not to discover the easiest method of lying down, but the best method of getting ahead. We are not going to economize anywhere. We are not going to contract; we are going to expand. We are telling, properly telling, the great national advertisers that now in this period of dullness they most of all need advertising to revive their markets. That advice is good medicine, and there is none better for ourselves to take. What we are going to do is to allocate at once a quarter of a million dollars for a quick and concentrated advertising campaign throughout the country. It will put heart into other business men, and it will be the most profitable \$250,000 we ever spent. We are not confronted with a calamity, but with an opportunity, and I intend to make the most of it." And so it was done.

What has caused the depression now existing we all know. It is the resultant of a number of forces energized by a stupid policy of financial goading. But only a fool holds such close communion with the past that he is dead to the future. This awful slump could have been avoided, mitigated, softened. It was not, and when the Federal Reserve Board lost control of the situation in September the gallop toward the abyss became a race. Prices began to run amuck. The country witnessed a "smashing" campaign. There was a plunge down. Everybody knows it. The world declared itself "in" on the incident. Everybody knows we took the wrong road, and everybody knows just as well that there is a right road. The thing is to get back on it.

It is a time for men of vision to follow the heroic and therefore splendidly good advice given in 1907 by the publisher to whom we have referred above. Never were there such opportunities for legitimate profit. Let him who has

lost not waste his time gazing on the wreckage. Let him rather fix his vision on what is to be—the recovery. Are raw materials within years ever to be so cheap again? The wise man buys when all the world would sell, and sells when all the world would buy. The market where there is no demand is the market where dollars count. The liquidation in most lines has been accomplished—overaccomplished. It is a market where a man can profit himself by profiting others. By taking advantage of the cheap prices he can reinstate demand and do his part thereby in restoring the natural price level. He does a service to himself and a service to his neighbors.

There are billions to be paid each year in taxes. There are billions more to be paid to the railroad workers and the miners, by contract. There has been put on every bushel of wheat and every pound of cotton a new obligation of toll which will abide for years. It must be reckoned in the cost of production. It is part of the price. And this is true not only of America, but of every country on earth. Each product has its toll to pay for the privilege of freedom which was won at such tremendous cost in the great war. Civilization has become more expensive. That is always the case after a great war. That is why the plane of commodity prices after a great war always rises permanently higher. It is not inflation—it is the factor of new cost that has become a permanent toll. So now it is economically impossible for prices to remain at the low level existing. They have to find a permanent and profitable resting place or civilization, as we know it, cannot continue. New standards of living have become fixed. They will remain, and they must be paid for.

The man who buys raw materials now for his factories is a sure-thing gambler as well as a benefactor. He is certain to win, and in winning he is sure to help the great basic industry of the country—agriculture. Not in six years has there been such a fine opportunity to buy, and there will not be again in another six years.

Aside from the financial aspects of the case, what Secretary of the Treasury Houston did was to break down public confidence. It is the duty of the business men of America to restore it. There is no better way to do it than by resorting to that most approved agent of business—advertising. Business rests in the dead middle of the transition period. The yesterday of taking orders is gone. There is ahead that field of struggle which appeals to American manhood—a battle in salesmanship calling for resourcefulness, skill, energy, initiative—the display of all the virtues which have gone to make this country the colossus that it is. There is the smell of conflict in the air, bracing, intoxicant, a challenge to red blood. Who will be in the vanguard? Whoever they are, the future is already in their hands. "Public opinion?" said a great editor, "I do not voice it; I make it." In days like these great leaders do not "follow trade"; they make it. They are the Napoleons of business.

So far, and so far only, can even the most meagre-minded men go in contracting the available resources of the Reserve Bank System. Already they have shot prices to such levels that the capital required for carrying of stocks and the conduct of business operations is but a fraction of what it was. There is no means by which credit can much longer be kept so stringent. It is about to tear itself loose. The frozen credits they told the country of last summer on account of the transportation situation do not exist, for the railroads report idle cars. The immense sums tied up in speculation they now say are not tied up, because the speculators, so the claim is, have been driven to the wall. The oil of commerce must at least be sufficient in volume now to grease the machinery of normal business. That is why there are open hints of approaching credit relief. Moreover, Congress is in session, and things that it was possible to do while a President was ill and a Congress in recess it is not possible to do now. The attention of the nation has been centered on the

destructive practices of Washington, and it will endure no more. There can be some confidence, therefore, in the expectation of reasonable credit conditions during the next year.

Last week we said "GO FORWARD!" We repeat it. There are billions to be spent for railroads, for highways, for dwellings, for machinery, and for goods of all kinds. There is enough work in sight to tax the labor capacity of the nation for the next 20 years. There is a need in the world for all we can produce and more. The fundamental factors favorable to good business are clearly discernible. The chief desideratum is a revival of confidence, and that can be secured by wise buyers going now into the raw-material markets. And confidence, too, can be made to bloom again by bringing into full play the right sort of publicity. While the public was not looking, Secretary Houston and others "sold" the country gloom and depression. Business men and wise leaders can now "sell" the country prosperity.

CONCRETE FACTS THAT SHOW THE DEVASTATING ACTIVITY OF SECRETARY HUSTON.

WHEN Secretary Houston arbitrarily suspended the War Finance Corporation the directors of the Corporation had before them applications involving the export of

\$17,500,000 of copper.

\$2,200,000 fabricated steel to Italy.

\$5,000,000 "Black Patch" tobacco from Tennessee and Kentucky.

\$4,000,000 cotton to Czecho-Slovakia for a Southern exporter.

\$25,000,000 cotton to Czecho-Slovakia for a group of Southern banks.

\$3,000,000 cotton for Italy by a group of bankers.

\$9,000,000 cotton for Italy by another group of bankers.

\$24,000,000 for the export of cotton by a syndicate of banks, headed by one of the largest national banks in the United States.

\$2,400,000 coal by a group of bankers.

\$4,000,000 cotton for Italy by another group of bankers.

\$4,000,000 ships to be bought or built in this country for Italy.

Every one of these applications WAS A DISTINCT AND SEPARATE undertaking and promised practical results with adequate security, in the opinion of the directors of the War Finance Corporation.

Secretary Houston thus arbitrarily prevented the sale of cotton, mostly low grade, to the amount of \$69,000,000, under credit terms offering ample security. If those sales had been made, as they should have been made, the effect on cotton prices would have been considerable. The facts are so eloquent that comment is unnecessary.

During the whole year 1919 we imported 5,405,405 bushels of wheat. In October, 1920, we imported 10,517,528 bushels, and the Department of Agriculture estimates that the November importations were at least 12,000,000 bushels. We are told that the price of wheat is low because we have more than we can use, but we keep on importing it. We have more wool than we can use, but we keep on importing it, and the Australian, New Zealand and Argentine crops are about to be dumped on our already surfeited shores. If an individual bought wheat while his barns were groaning with a surplus supply, a commission in lunacy would examine him. The nation is merely many individuals.

The Nation's Agricultural Interests at Stake

IN his annual report, Secretary of Agriculture Meredith lays great emphasis upon the wonderful crops of the year, and in his opening sentences says:

"The farmers of America have again justified the faith of the nation in their ability to meet its requirements of food, feed, and raw materials for clothing. They have produced this year in the face of enormous difficulties the largest harvests in the history of American agriculture with a single exception."

And then, with a spirit which has too often prevailed in the Department of Agriculture, but which we had hoped that Secretary Meredith with his broad knowledge of the situation would not adopt, there is a somewhat flamboyant enthusiasm over the great production of crops, as though that indicated an enlarged agricultural development.

As a matter of fact our agricultural condition should be measured by acreage and not by production, for production depends largely upon weather conditions over which man has no control. We can control the acreage seeded, but we cannot control the output of the seed.

Our acreage shows a very large decrease in 1920 as compared with 1919, 1918 and 1917. Of cereals, potatoes, tobacco and cotton, our total acreage for 1920, based on the October estimate of the Agricultural Department, was 260,900,000 acres, or nearly 20,000,000 acres less than the acreage of 1919 and 1918, and 39,000,000 acres less than the acreage of 1917. Indeed, the acreage last year was the smallest since 1914. And yet we are boasting of a great agricultural advance.

The conditions early in the season of this year were most unfavorable, but Providence gave to us during the summer the most remarkable weather of which we have any record for the cultivation and the development of crops.

With the decrease of 20,000,000 acres under cultivation in the main staples mentioned, we had a large increase in production despite the lessened acreage because nature smiled beneficently upon the fields of the country and gave us an almost unprecedented yield compared with acreage. We have no right, however, to boast of this abundant yield, for that was not of our making. That was Nature's good work. On the other hand, we have a right to look with serious alarm upon the decreased acreage, and the indications are that the wheat acreage for the present year and the acreage for other crops for next year will show a still heavier decline. The wheat sown in Kansas is considerably less in acreage than it was last year, and this will probably prove to be the case in nearly every other winter wheat State. With decreased acreage, which is already in evidence for the coming year, nothing but phenomenal weather conditions producing phenomenal yields will next year give us crops sufficiently great to meet our actual necessities. If the coming year should show unfavorable growing conditions by reason of adverse weather, the smaller acreage which we will have will result in a reduced production which will seriously endanger our entire food supply.

Secretary Meredith recognizes this side, and in his report emphasizes the fact that farmers are not securing adequate returns for their efforts.

"The very foundation of our nation—the stability of our agriculture"—says he, "is threatened, and everything possible must be done to prevent or at least to lessen the effect of the recurrence of conditions under which large numbers of farmers conduct their operations at a loss."

In his lengthy and extremely interesting report Secretary Meredith makes a number of important suggestions and among

them is one that the nitrate plant at Muscle Shoals be put in operation to the end that this nation may escape for all time from dependence upon foreign nitrate fields.

The importance of putting this Muscle Shoals nitrate plant into operation is strongly urged by Secretary Meredith, and very wisely so. A vigorous effort has been made in many directions to prevent the Government from operating the Muscle Shoals plant. Much of this looks like propaganda, either in the interest of Chilean nitrates or of German interests, or of some fertilizer interests which would prefer that the nitrate plant at Muscle Shoals should not be operated. Some of this propaganda probably emanates from all three sources. The Muscle Shoals plant was built after the most thorough investigation as to its importance to the country in times of peace as well as in war. It is centrally located, it is close to the phosphate rock of Tennessee. Operated to its fullest capacity, its value to the agricultural interests of the country and to the food consumers of the country would be almost incalculable and would many times justify its construction.

In discussing the matter of nitrogen and potash, so essential to the safety of the nation in time of war and equally essential to its agricultural interests in time of peace, Secretary Meredith said:

"The European war emphasized the fact that no effort should be spared to establish national independence in the production of fertilizer materials. This is especially true in the case of nitrogen, which is not only a valuable fertilizer ingredient, but an essential element in the manufacture of munitions. Of all the nations involved in the war, Germany alone had a sufficient nitrate supply within her borders, but England, France and Italy are now rapidly perfecting plans to make themselves equally secure in this respect. Increased interest has been manifested in this country, also, in the study of methods for fixing atmospheric nitrogen, and the Department of Agriculture, through the Bureau of Soils, has actively co-operated with the War Department in this important field. The production of ammonium sulphate from by-product coke ovens and gas plants has greatly increased, but not sufficiently to meet the demand for fixed nitrogen.

"The nitrogen fixation plant at Muscle Shoals, Ala., completed shortly before the armistice, offers a hope for an independent source of nitrogen for fertilizer use in time of peace. This plant is prepared to make calcium cyanide, or, by some additions, to manufacture ammonium sulphate. With modifications, also, it may be equipped for the preparation of highly concentrated fertilizer materials which will be free from filler, and therefore result in a considerable saving to the consumer in freight charges. The plant is still idle, awaiting the necessary authority from the Congress for its operation. It is hoped that the matter will receive consideration at the next session of the Congress, and that the requisite authorization will be granted without further delay, in order that the nation may escape, once for all, from dependence upon foreign nitrate fields, and that an adequate supply of nitrogen may be developed, both as a protection in times of national stress and to meet the growing demand for this valuable product for fertilizer purposes.

"The experimental kelp plant at Summerland, Cal., the purpose of which is to demonstrate the practicability of extracting potash and useful by-products from the giant kelps, is in active operation and valuable results are being secured. Unquestionably, it will be possible, when the best methods have been worked out, to develop a potash industry on the Pacific Coast capable of supplying a considerable part of the nation's needs.

"Two processes for the recovery of potash from certain rocks have recently been developed by the Bureau of Soils, and both are being utilized in commercial practice. The 87,000 tons of potash annually lost from flues and stacks of cement plants are still, in the main, going to waste. Only about 1 per cent was recovered in 1919. A similar situation exists with reference to the collection of potash from blast furnaces. The department is now making a survey of this situation, and preliminary results show that the dust from blast furnaces is higher in potash content than the cement dust and that it can probably be recovered more economically. The potash that escapes from these two sources would, if collected in marketable form, go a long way toward meeting the normal potash requirements of the country. There is ample justification, therefore, for the appropriation of sufficient funds adequately to study those phases of the problem which properly come within the scope of this department's activities."

THE THREE HUNDREDTH ANNIVERSARY OF PLYMOUTH ROCK.

IN celebrating the three hundredth anniversary on December 21 of the landing of the Pilgrim Fathers on Plymouth Rock, probably no better measure of New England's achievements can be presented than the statement credited to Lowell, in the course of which, many years ago, he said:

"The value of a country is weighed in scales more delicate than the balance of trade. On a map of the world you may cover Judea with your thumb, Athens with a finger tip, and neither of them figures in the prices current, yet they still live in the thought and action of every civilized man. Material success is good, but only as the necessary preliminary to better things. The measure of a nation's true success is the amount it has contributed to the thought, the moral energy, the intellectual happiness, the spiritual hope and consolation of mankind."

Massachusetts is small in territory; an area equally as large could be cut off from a number of the States of the Union without ever being missed. Its material success has been one of the marvels of the world, but greater than all of its material success are its achievements in what Lowell rightly called "true success" in its contribution to the thought, the moral energy, the intellectual happiness, the spiritual hope and consolation of mankind.

In many things pertaining to national welfare Massachusetts has been a pre-eminent leader. The spirit of the Pilgrims which has found expression through the centuries in the life of that State and of much of New England was shown in the founding of Harvard College within eighteen years from the time when the Mayflower, with its colony of 100 people, reached the barren, inhospitable, icebound shores of Massachusetts.

When it is remembered that during the first winter half of the colony died, and that the others had to face the hardships of an unsettled land, endangered constantly by contests with the Indians, forced to build rude huts with inadequate tools and create and develop sufficient agriculture to feed themselves, it is a marvel that these people were ever able within eighteen years to give much consideration to educational work, and yet an expression of their enthusiasm for education was given in the founding of Harvard.

It has been said that the soil of Massachusetts was so barren that the Pilgrims had to dig a hole between the rocks and plant a herring as a fertilizing agent before they could plant seed for their crops. Typical of the poverty of the soil of much of the State, with its icebound, rockribbed shores; typical of the difficulties under which they labored, as this story is, the men and women who began civilization's work on the shores of Massachusetts' coast have led in many of the world's great achievements. Sometimes they have been bigoted, sometimes narrow and provincial; sometimes they have regarded Massachusetts as the center of the universe and Boston as the center of Massachusetts and of all world knowledge, but these things may all be forgiven.

The people of Massachusetts have always been patriotic to the core. They have always stood for human liberty; they have always been ready to fight for what they believed to be the right and for liberty, and they have developed an educational system which almost justifies the spirit of boasting and self-complacency with which the people of that State regard themselves and their State. They cannot be blamed for being proud of the record of Massachusetts, for surely that State has in finance, and commerce, and industry, and education made a marvelous advance. It was not many years ago when the value of the manufactured output of Massachusetts exceeded that of the entire South. With an area of 8000 square miles and a population of something over 3,000,000, Massachusetts has created a wealth which should be an inspiration

to the people of States blessed with greater natural advantages.

The old story is worth retelling that when at a convention a roll call of States was answered and one by one the delegates told of their wonderful natural resources, the delegate from Massachusetts said, "I have listened with interest to the wonderful story of the golden grain of the West, of the wealth of minerals of California and Colorado, of the coal and iron and the timber and the cotton of the South, but I am here to tell you that of these things Massachusetts has none. We have, however, gone to the South and bought its coal and iron and cotton and timber; we have gone to the grain fields of the West and bought our foodstuffs; we have taken the gold of California and some of the minerals of Colorado, and on this wholly artificial foundation we have built an industrial structure which has created greater wealth than that of most of the sections whose delegates have told of the marvelous natural advantages which they enjoy. We have done it through the power of educated brain and aggressive energy."

This boast was justified, for Massachusetts has gone to the West and to the South and to far-distant lands and gathered its raw materials. It does not raise enough foodstuffs to support the city of Boston for more than a few days. It has brought its hides and its wool from Texas and Australia and South America, and it has developed one of the greatest shoe and woolen industries in the world. It has gone into the South and taken its cotton and the coal with which to run its mills, and it has made of itself one of the greatest textile centers of the world. It has developed a thrift which has made the savings banks of Massachusetts the depository of hundreds and hundreds of millions of dollars.

Massachusetts in time past has financed much of the textile development of the South and much of the railroad building of the Far West and in Mexico. It has bought its raw materials from other sections, turned them into the finished product, sold that product to the world and then sent the profits thereof into all sections of this country for the development of other industries.

It is well, therefore, while Massachusetts is celebrating the three hundredth anniversary of the landing of the Pilgrims that the whole nation should study what has been achieved by the men and women of Massachusetts and of New England during the last 300 years in art, in science, in education, in literature and in wealth creation, and thus catch a new inspiration and a determination to surpass the achievements of New England in these things to the extent that the resources of other sections surpass the limited natural advantages granted to New England.

New England has made its achievements despite the lack of natural advantages. It has battled upstream and won the contest. To the South and to the West its success should be an ever-present stimulation.

A HOPEFUL SIGN OF THE TIMES.

First Presbyterian Church.

Henryetta, Okla., December 2.

Editor Manufacturers Record.

Thank you for your generous offer to send your excellent magazine to me for half the regular rate. I have read the copy sent me, and consider some of the articles well worth the cost of the whole subscription. I am sure the MANUFACTURERS RECORD will form an important part of my equipment during the coming year. I shall quote it (with due acknowledgment) in my next Sunday's sermon, and expect to have frequent occasion to do so.

The serious and friendly attitude taken by some of our leading secular journals toward moral and religious questions seems to me one of the hopeful signs of the time. May I venture the opinion that you are doing a great service to the country in this way at a very critical time?

(REV.) F. O. SEAMANS, Pastor.

Possibilities for Good or Evil in the Federal Reserve System

MR. E. R. DICK, secretary of the Coffeyville Vitrified Brick & Tile Co., Coffeyville, Kans., in a letter to the **MANUFACTURERS RECORD**, writes:

"We have taken the time to read some of your editorial and other comments on the present lowering of prices of the staple commodities with its resultant demoralizing effect on nearly every line of business.

"We cannot agree that the Federal Reserve Board's action has as much to do with this question as does the absence of the United States in a national league of some kind.

"Are we not correct in our conclusion that a League of Nations, properly functioning, would stabilize the entire world and give the Old World a buying power that is entirely absent at this time?

"Are we not right also in our supposition that the general public has its mind set that prices are entirely too high in practically all lines of commodities, and that they are determined not to buy, and is this not also one of the main reasons for the lowering instead of laying it at the door of the Federal Reserve Board?

"If we understand correctly, you would repeal the Federal Banking Act and go back to the old method of finances that fostered panics that were far more disastrous in their effect than the present decline of prices.

"We respectfully submit the foregoing questions by reason of your direct letters to us, and also with the thought that you may be less prejudiced in your views of the Federal Reserve Board."

We think a more careful study of the situation would convince Mr. Dick that his position is erroneous. The Federal Reserve Board has definitely worked since last fall to bring about a rapid deflation of credit and of commodities. Its persistent statements to that effect created a panicky feeling throughout the country and caused buyers to hold off, with a resultant collapse of prices of farm products and other things.

Secretary Houston, an active member of the Board, has repeatedly been warning the country that there would come a great drop in prices, and with these statements before the public, any man who did any buying that was not absolutely necessary for immediate needs would have been a fool.

Foreign buyers stopped purchasing because they were told by the Government of this country through the Secretary of the Treasury and the Federal Reserve Board that there would necessarily be a great drop in prices. Cotton mills stopped buying and consumers stopped purchasing because they found reiterated day after day advice to the banks of the country to lessen credit and to consumers not to buy, since prices would certainly decline.

The Federal Reserve Banking System, with some modifications, could probably become a tremendous power for good, but its success depends wholly upon the character and the ability of seven men to whom has been committed the greatest autocratic power ever given to any seven men in the world's history. Upon their judgment and their integrity and their far-reaching knowledge of the financial history of the world through the ages depends the question as to whether the Board is to be a power for evil or a power for good.

The public impression that prices were entirely too high was largely based on the reiteration of this by the Federal Reserve Board and its various branches and by Secretary Houston. In many cases prices were entirely too high, but prices today are entirely too low, and the farmers have had to face some \$7,000,000,000 or more of depreciation in the price of their products, while merchants and manufacturers have had to face lack of orders and a rapid decline in the price of their commodities mounting into the billions.

The history of finance through the ages should have shown the Federal Reserve Board that any attempt to break down

prices of wages and of commodities by any rapid deflation of credit would inevitably produce business chaos, and to a large extent we have that. The only safe way to come down from the pinnacle of high prices was not by being kicked from the top of the mountain to the bottom of the chasm, but to come down gradually and safely. To do this would have required several years of increased production, overtaking consumptive requirements, and gradually the country would have become adjusted to a new order of things with safety and without serious losses to anyone. But the method adopted by the Federal Reserve Board has brought upon the country a loss almost as great as the cost of the war.

If Mr. Dick will read the statements made by Senator Owen, one of the leading spirits in the creation of the Federal Reserve System, he will see that nothing which the **MANUFACTURERS RECORD** has said on the subject is as strong as the statements made by Senator Owen, who, as a financier and as a far-seeing student of economics, is certainly as well informed as any man on the Federal Reserve Board, and far better informed than some of them.

Mr. Dick takes the ground that the absence of the United States from an international league of some kind is largely responsible for present conditions. With that we do not agree. The League of Nations has been conducting a campaign for the restriction of credit, and if we had been a member of the League we would have suffered just the same under the rapid deflation practiced. It is true that if President Wilson had not autocratically demanded that the country should yield its judgment to his individual views and enter the League of Nations upon his terms and no other this country would be a member of the present League. But we think that no greater blessing has come to America than the fact that it was saved from the present League of Nations, even with the reservations demanded by the Senate. The overwhelming vote of the country against the League of Nations shows how the American people feel on that point. One of the most active advocates of the League of Nations, former President Taft, has now come to a full realization of the fact that the League is entirely different from what he had supposed, and he admits that the American opponents of the League had good ground for their position, as shown in a statement from him published in this issue.

Our entrance into the League of Nations on the basis of the Covenant as brought back to the United States and without drastic reservations would not have steadied the world nor brought world harmony. Even, however, if through entering the League of Nations we could have brought about continued prosperity in this country, we would have been selling the soul of American sovereignty for less than a mess of pottage. The **MANUFACTURERS RECORD** would not be willing to see this country resign its sovereignty to the complete domination of European and Asiatic diplomats even if by doing so it could temporarily have enjoyed abounding prosperity. We count the safety and sovereignty and the life of this country as infinitely greater than any material interests, even if these material interests could have been made marvelously prosperous for the time being through the League. But, on the other hand, we are satisfied that our entrance into the League of Nations by surrendering our sovereignty completely into the domination of European and Asiatic diplomats would not have saved us from the present depression in business if the Federal Reserve Board had continued its definite plan to break down prices and wages by deflation or restriction of credit.

Mr. Dick has entirely misunderstood the **MANUFACTURERS RECORD** in interpreting its criticism of the present Federal Reserve Board as a desire to repeal the Federal Banking Act.

Not a line on which such a suggestion could be founded has ever appeared in the MANUFACTURERS RECORD. We have opposed the present Board, and we have said that the system itself might be very different from the Board which controlled it, and we have urged that there should be some change in the organization of the Board by which farmers, merchants and manufacturers could be represented on the Board in order to avoid its complete domination by banking interests or banking men. The great producing interests of the country—merchants, manufacturers, transportation interests—are not represented on a Board which controls the entire finances of America, and thus controls the business life of the country. Against this we have protested and urged a modification of the act in such a way that men of the highest ability, representing the various interests of the country, should be members of the Board without the banking influences completely dominating the management of the system. Our experience has been that bankers, to a large extent, regard themselves as the only people in the world that understand finance, and the banking thought has been inherited from generation to generation until the banks of the country feel that they, and they alone, know anything about finance. With that position we entirely disagree.

PLEASING PHRASES BUTTER NO PARSNIPS.

THE President, in his message to Congress, declared that he wished to emphasize once more the need for action "to make rural life more attractive and healthful."

There is but one way in which to make rural life either attractive or healthful, and that is by permitting those who live the life to have sufficient profits from their work to enjoy decent living conditions. Nothing comparable to the avidity of American farmers for modern appliances in the home has been seen. They are ready spenders of money when they have it. When a farmhouse is without a bathroom, it is not because the owner wants to be without that convenience. He knows the value of modern conveniences without being told by a commission. The advertising pages of the farm papers are alive with descriptions of all the things that go to ease farm life. They are a better educational force than all the Government propaganda in the world ever could be.

But it is quite useless to tell a farmer that he can put in a lighting system for, say, \$300, when what is keeping him awake nights is how to get hold of \$50 wherewith to pay his bill at the village hardware store. Talk of improvements is simply irritating to men engaged in a terrific struggle to avoid bankruptcy.

Improvements in living add to cost of production. When negroes are housed in decent houses, with regular stoves, pots and pans, and have perhaps a sewing machine, and maybe a Sunday suit of clothes, they require that much more income. So does the owner. If he puts in \$5000 in improvements, his place must earn him an additional profit each year to the amount of 6 per cent on \$5000, or \$300. It is all a question of income.

But along comes some such a man as Secretary Houston, who thinks that any price for cotton in excess of the poverty prices of a decade ago is profiteering, and, with the apparent sanction of the President, he and the Government departments engage in propaganda, financed by farmers' taxes, to beat down the price of everything the farmer produces. Then, when prices have gone down to less than half the cost of production, the President says that rural life must be made more attractive. It is amazing.

Farmers want no charity. They resent the interference of urban gentlemen who study them as they would applicants for aid and tell them how beneficial it would be to do this or that. What the farmer wants is fair treatment, and he will

take care of improvements himself. Give him the money and he can make rural life attractive—more attractive than city life. But he cannot do it if he is compelled by his Government to pay exorbitant wages to railroad and mine workers and is at the same time compelled by that same Government to take losses instead of profits for his own products.

We have been preaching for 40 years that cotton was being sold at less than cost and that the continuance of the system was only possible by depriving the producers of their right to a decent living. If there was any profit on cotton, it came from exploitation of the labor. It has been positively nauseating to have fat welfare commissioners tell a cotton county that it ought to have better roads and schools when the fatter men financing these commissioners were engaged in a business way in depressing the price of cotton and preventing the county in question from having the means to finance any improvements whatever.

The present Administration during the last year, while the President was ill, under the leadership of Secretary Houston, has done more to make rural life unattractive than any other Administration ever did. If any citizen doubts that, let him send to Washington and secure a copy of the testimony given before the Agricultural Committee of the Senate during the past week by the wool producers, the cattle interests, the cotton farmers and other agricultural elements. It is a sickening story—a formal record of household tragedies such as seldom, if ever, before were known in the United States. Farms deserted, farmers ruined! Mortgages on sheep and cattle in excess of the gross value of the herds in bulk! Despair where hope and prosperity a year ago reigned supreme! Some suicides and more feared! Rural life attractive? Aye, but first make it tolerable.

THE SOUTH AND A PROTECTIVE TARIFF.

COMMENTING on the organization of the Southern Tariff Association by leading business men of the South in the interest of a protective tariff, the Fort Worth Record calls attention to the fact that among the speakers at the recent Southern Tariff Convention strongly in favor of a tariff were Senators Ransdell and Broussard of Louisiana, Governor Parker of that State and many leading business men, and in closing its editorial said:

"This is to remind the Democratic Senators and Congressmen of Texas and the men who are assumed to be leaders of the militant Democracy of Texas that there are foes within and without their organization. Leadership is demanded as never before demanded, and that the peewees and pinheads or little yawpers of politics should be sent to the rear."

If the people of Texas and the South generally are wise they will send the small politicians to the rear and put to the front men who recognize the supreme need of the upbuilding of the South regardless of the peanut politicians who in the past have sought to tie this section to pinhead politics of free trade.

Of all sections of America, the South needs a protective tariff to a greater extent than any other part of the land, and if men who are supposed to be leaders of the Democratic party do not recognize and aggressively advocate a protective tariff, the people of the South will see that men are sent to Congress who do represent the real needs of the South and are willing to advocate a protective tariff for agriculture and industrial interests alike.

The curse of the free-trade policy, which has been made a greater fetish than ever was cotton, has, like the "all cotton curse," rested upon the South for the last fifty years. But the people of this section are awakening to the need of a change, and the change is going to come, and is coming very rapidly.

HOUSTONISM.

(Copy.)

Honorable Franklin K. Lane,
Treasurer, European Relief Council,
42 Broadway, New York City.

My Dear Mr. Lane—Enclosed I beg to hand you check for — from Mrs. Meyer and myself in the name of four happy, well-fed children.

Under "normal conditions," of which we hear so much and see so little, it is understood to be a cardinal principle of philanthropy to help people to help themselves, if possible. If your former associate, the Secretary of the Treasury, would perform his duties in accordance with the expressed will of the Congress and the manifest desire of the people of this country, the people of Europe would be able to help themselves a great deal more, and there would be less need for this charity to which you and other citizens in this country are rightfully and sympathetically, under present conditions, devoting our time and money.

The War Finance Corporation can materially assist in maintaining a flow of American products to European countries that are unable to obtain them, and to the extent that this might be done, it must be recognized—although I am loath to say it—that there are at least some of the underfed and suffering children of Europe who are in their present condition as a consequence of the policy of the present Secretary of the Treasury. Nor is the misery produced by his policy confined to the children of Europe; hundreds of thousands, nay, millions, of American citizens, though not starving, are nevertheless reduced to genuine mental and material distress because of this same policy so ruthlessly carried out.

We accept the idea that in war, life and property must be freely sacrificed to maintain a great principle. History records no precedent, however, for the wholesale sacrifices imposed upon the civilized world by the Secretary's present policies for the purpose of maintaining the petty platitudes of the outworn political economy which he professes.

The cheeks of the children of Europe are gaunt with hunger, but the cottonseed that would furnish them the needed fats is rotting on the fields of Mississippi; they walk in tatters, and the cotton fields are white with cotton it does not pay to pick.

The sleek, breeding herds of the prairies, whose get is needed for the coming years, are led to slaughter because our financial leadership in the Treasury confesses itself impotent.

The corn and wheat of our great granary States lie in the bins because the farmer cannot sell in the present demoralized market without making himself a bankrupt, yet we are told by the head of finances of this country that "nothing can be done."

The factories of New England are idle and their labor unemployed, not because their product is not wanted, but because our domestic and international organization for the production and distribution of goods is suffering a breakdown, yet we are solemnly advised that "nothing can be done."

I should feel like a slacker for the rest of my life if I failed to lift my voice in protest against such an absurd and disgraceful admission.

With every good wish for success in your worthy campaign, and in the hope that another winter may see a different condition, I remain,

Sincerely yours,

(Signed)

EUGENE MEYER, JR.

We reprint the foregoing, as well as the testimony of Mr. Meyer before the Agricultural committees of Congress, elsewhere in this issue, because Mr. Meyer has had the experience of coming into intimate contact officially with Secretary Houston, knows his thought processes, understands thoroughly his attitude, and is in a peculiarly fine position to diagnose with exactness the consequences of Houstonism.

It is not meet that the country should pass through what it is now enduring without understanding fully why it has been brought to this measure of sacrifice, and by whom. Although, therefore, we are one and all girding up our loins and consecrating ourselves to battle under the new conditions bravely and optimistically, we can only avoid error in the future by knowing accurately what were the blunders of the past. History will write down as a complete analysis of Houstonism one paragraph from the above letter:

"We accept the idea that in war life and property must

be freely sacrificed to maintain a great principle. History records no precedent, however, for the wholesale sacrifices imposed upon the civilized world by the Secretary's present policies for the purpose of maintaining the petty platitudes of the outworn political economy which he professes."

The nation has been sacrificed to the vainglorious obstinacy of a little-minded man! Let none be deceived by the vapid utterances of those who say that the calamity in trade is natural and was bound to come, or of those who profess to believe that it is a good thing that values have been knocked out of all commodities in America and in the world. That is the philosophy of hopelessness, the cry of the pessimist, the religion of the impotent who can do no more than weep while cities burn. Never before in all history was it sought to deflate a great war in six months. Never before in all history did a Government, whose people were the greatest producers on earth, engage in a deliberate campaign to compel every producer to lose money. Never before was a world credit reservoir in the hands of a man who could conceive no better use to make of it than to choke the outflow. Never before in any nation was there witnessed an attack on securities by responsible Government authority so drastic and violent that within three months it took so much value out of commodities that what formerly represented double the amount of loans granted ceased even to cover the loans. Inspired writers and Treasury apologists may shout and write until doomsday, but they will never be able to convince the American people that it was a good thing so to reduce values that outstanding mortgages on the sheep of America aggregate a sum greater than the combined worth of all the sheep in the country.

And when Governor Harding presents a pitiable defence by quoting figures to show that prices have also dropped for things not produced in this country, such as coffee and rubber, men rub their eyes in wonder as to whether he is serious or not. Could the markets of America at such a time be broken down without breaking down also the markets of other nations? Of course not, as any child knows.

Secretary Houston and his associates have enthralled the world. They have given civilization a greater defeat than any it sustained in the great war. They have beaten down credit, outlawed confidence and raped values. They have gone back a hundred years to the theories of economics that our forebears distrusted, and they have clipped from a textbook a rule to guide the financial destinies of earth.

This nation will go on, and it will go on triumphantly, but it will not forget. It could not if it would. No tyrant could have levied such toll upon a people; no defeat in war could have been so terrific a blow. So hard a taskmaster is ignorance when enthroned. The schoolman is wedded to his theorems, but the world cannot be molded to fit his dreams. For this man smote the rock of national resources, whence flowed abundant revenues, and crushed the outlets. His habitat is the slough of despond, and no grass grows where he has trod. It is not enough, we have learned, that a man be honest. An honest man may work more havoc than a scoundrel. It is not that Secretary Houston has sought to bring about a status of world poverty and trouble. No doubt he meant well. That is the tragic part of it—that one who meant to do no harm, perhaps, should be of such a mental poise that flirtations with disaster become his chief vocation.

We are about to pass from under the shadow of this man's awful power, and for that we can be grateful. Much that he has done can be undone. His capacity for harm will terminate in a few weeks. Congress meantime is watching him. But the nation will not halt. It will move forward, bravely and courageously, for few indeed are those who believe that there is organic sickness. The effects of the chloroforming will soon wear off and the nation can leap forward into a new era of abounding prosperity.

PAINTS DOLEFUL PICTURE OF ENGLISH WORKING CONDITIONS, AND WARNS OF DANGER OF RUSH OF IMMIGRATION TO AMERICA.

IN one of a series of articles published through the McClure Newspaper Syndicate, Ole Hanson, the former mayor of Seattle, has written on industrial conditions as investigated by him during his recent visit to Great Britain. He states that the Government and trades unions of Great Britain are both trying to bring about better conditions, but he believes these efforts must fail because that country, with worn-out resources, cannot compete with younger, richer nations, and the only hope of the workers lies in emigration.

He states that no comment is necessary on the wage scale of English workers as outlined in the following, and that he cannot find adjectives to describe the housing conditions in the country:

Ordinary agricultural labor, he says, at the time of his visit in October was receiving from \$8.05 to \$9.10 per week. In the textile trades, which are carried on principally by women and children, the average labor at the mills received about 31 cents an hour, while the highest paid spinners made about \$17.50 a week and weavers about \$14 per week. English teamsters received about \$2 a day; carpenters about 41 cents an hour; building labor about 36 cents per hour; and the best traveling salesmen that he met averaged about \$77 a month—not a week, but \$77 for a month's work!

He points out that living conditions are not 50 per cent of ours and that wages in the main are less than 50 per cent of what is received in this country for practically the same character of work.

After visiting Manchester, the great textile center, he said he left it with a feeling that it would be a great thing for our employers of labor as well as for workers to visit England and see for themselves what the establishment of a government within a government means to the people. He asserts there is no question about it that labor stands on one side and the Government and the middle classes on the other. Every peace is but an armed truce, and both sides are trying to do the impossible and make a country rich which is normally poor in resources, and establish living conditions for twice as many millions as ought to live there. Because there is not enough work to go round, the workers look upon labor-saving machinery as an enemy to labor.

A worker among the poor of Liverpool for many years told him that few people realize the poverty of the people. He said that "most of the homes in my district are unfit for human habitation, and there are so many people out of work, and out of work means starvation and freezing. I find men sleeping in underground privies covered with their only coat. I have been here 27 years, but this winter will be our worst."

One wonders why these conditions can prevail among 50,000,000 freedom-loving people, especially in England, which is one of the most thoroughly (unionized) working countries in the world, and Mr. Hanson proceeds to answer his question by stating that:

"It is not because of bad laws or because of wrong divisions of the product of the joint endeavor of capital, labor and management. It is not because of bad unions or bad government or bad employers. It is because Britain is poor in natural resources, because goods have to be hauled in and hauled out. It is because the only way trade can be carried on at all is to meet foreign competition, and if the foreign competitor is rich in natural resources, has a great market right near raw materials, the workers then will receive more than where great extra expense is added in hauling, etc.

"England, Scotland and Wales have had an easier time in the past because the great new countries could not make enough to

supply their own needs; today we have passed that point in the economic life of our nation where production is greater than home consumption, therefore we are fast becoming very great exporters. Other countries are in the same position, and are competing with old-established, worn-out countries.

"As time goes on, our country and other countries will produce still greater percentages of excess over their needs, and these goods will be sold where Britain now sells her goods.

"The only escape from bad conditions for the people of the British Isles is emigration. The only hope of maintaining industry on its present giant scale here is for the workers to sink back to the pre-war level, and even this can last but a short time.

"England's great skill in shipping, commerce, finance and manufacturing cannot long offset economic advantages possessed by newer and richer countries. No man-made law or plan can put coal and steel and oil and cotton into British soil. The rest of other parts of Europe where nature did not perform the task. Therefore, what will the people of Europe do?

"They will crowd the passport offices by hundreds of thousands and try to escape to our land, and eventually, unless checked, bring about the same scale of anti-hill existence that exists throughout Europe. And this is exactly what is going on.

"This great trek of humankind is now taking place. There is but one remedy worth talking about, and that is the passage of laws for a real selective immigration and scientific distribution of immigrants in our own land.

"My last article of this series will deal with that law. Some such law must be passed if we are to save our children's birthright.

"Every man who has visited any part of the Old World knows I am right."

WOULD HAVE SECRETARY HOUSTON AND MEMBERS OF FEDERAL RESERVE BOARD RESIGN.

THE MANUFACTURERS RECORD has received from H. S. Lipscomb, a merchant of Trough, S. C., a copy of a letter sent to Senator E. D. Smith of that State, in which he severely criticizes the deflation policy and manipulation of America's finances in such a way "that present conditions with all agricultural classes are nothing short of a financial tragedy," and urges that the Secretary of the Treasury and the Governor and members of the Federal Reserve Board resign. The letter is as follows:

Trough, S. C., December 4.

Hon. E. D. Smith,
Senate Chamber,
Washington, D. C.:

My Dear Senator Smith—Again I am taking the liberty to presume on your valuable time, but my cause pleads my apology.

I am old enough to recall the dark days of the sixties, with the Hades period of reconstruction; then our international horizon was a very different visage from what we now have. Hardships which our people would undergo then, seemingly with alacrity, would now constitute a *casus belli*, and, indeed, our people, almost to a man, are up in arms. The axiom, "You cannot fool them all, all the time" is a maxim infallible.

The Secretary of the Treasury, Mr. Houston, and the governor of the Federal Reserve Board and its members have manipulated America's finances in such a way—they call it deflation—that present conditions with all agricultural classes are nothing short of a financial tragedy. The arbitrary course and raw deal which the aforesaid officials, who should be the servants of the people, are handing out to them is conduct which baffles our understanding. The present economic conditions, to continue, are worse than a state of bondage, but we come of that indomitable, Caucasian race that in all history has been the world's freemen.

I know that you are too patriotic a Senator to be influenced by political affiliation in issues of life and death like those which now confront us.

It seems to me that the thing to be done, if it can be brought about, is to have the resignation of the gentlemen above referred to. We are very hopeful that the investigation of their conduct, which is now on foot on the part of our Congress, our Governors and the people, will show the wolf in the sheep's clothing.

With my highest personal regards, and when I can serve, command, I am,

Very truly yours,

(Signed) H. S. LIPSCOMB.

Commercial Honor Must Be Maintained

IN olden days men regarded commercial integrity and honor as sacred as the honor of their own families. In those good old times, when a man's word was as good as his bond and when no man of honor would for a moment think of dishonoring either word or bond, men regarded the cancelling of contracts, merely because to fulfill them would involve a financial loss, as dishonorable in the extreme. A man's commercial honor was then as sacred as a woman's honor.

Unfortunately, however, there has developed during the last few years a lower tone of morality. There has, indeed, been a breakdown of the moral tone of this country and of others. It was the boast of New England in its early days that its commercial integrity had never been questioned, and communities esteemed their financial credit as highly as their individual honor.

That is the spirit which must once again be reborn throughout this country in individual and municipal life.

During the last twelve months legitimate, honestly-made contracts have been cancelled to the extent of hundreds of millions of dollars merely because those who had signed them found that to keep their engagements would involve a financial loss. To save their pocketbook they have deliberately sold their honor. They have counted their financial success as superior to their commercial honor.

In doing this they have broken down the moral forces of the nation; they have taught their clerks and their children that financial success is more important than honor and integrity and stability of character, and they have sown in their own families, among their own clerks whom they expect to be honest and live up to their word, and in all the avenues of business with which they come in contact, the seed of rottenness which will produce a harvest of rottenness in individual and community life.

The man who breaks a contract merely because to keep it would mean financial loss has lost his sense of honor, breaks the faith in humanity, and, if he is a professed Christian, has certainly lost his sense of religion.

That the fulfillment of all contracts which have existed during the last twelve months would have meant great losses to many people is entirely true; but woe betide the individual or the nation which puts individual and commercial honor below financial gain or losses.

The whole situation is interestingly presented in a circular-letter recently issued by the American Exchange National Bank of New York City, which says:

"Standards of commercial honor have fallen low indeed when men can repudiate contracts and then justify their action upon the score that fulfillment of their agreements would have resulted in heavy losses. In the old days tradition required men to meet their debts and fulfill their contracts to the last farthing, and men who lost everything were frequently known to pay and then shoot themselves. That was silly and weak, for it disclosed a lack of the qualities that enable men to meet adversity competently, but it demonstrated the power of the idea of commercial honor. We cry out daily against the decline of morals among the masses, put up our hands in horror at the mention of graft, lawlessness in general, and then explain that we cancelled a contract because we found that to carry it out meant loss to us. The sanctity of a contract is just as necessary to such a society as ours as are safeguards to property against theft. Men will not trade where they cannot trust. Elaborate safeguards in the exchange of goods hamper trade, decrease production, limit intercourse and otherwise handicap commercial operations. There must be confidence—trust—before there is freedom of action, and that is what is being destroyed by the cancellation of contracts as a result of the collapse of prices. That the cancellations are in the nature of reprisals is no excuse. The only reprisal that should be visited upon violators of contracts is the reprisal of commercial ostracism. The attitude which justifies cancellations grows out of the 'within the law' code which harks back to the days of the wolf-pack in industry.

That day has gone, but some of its ideas are with us still. Present-day contract repudiators even use the machinery of the law to further their plans. Numerous cases have been reported in which the legality of the contract was admitted, but cancellation was nevertheless resorted to upon the theory that the law's delays would give the cancellor the use of the money for a period of at least two years at a maximum rate of 6 per cent and costs. It has been suggested that a system of Federal commercial courts be immediately organized for the express purpose of defeating these attempts to use the machinery of the law to keep creditors out of what is justly due them. If such a thing is feasible under our complicated form of dual government, the sooner it is put into operation the better for everybody.

"There isn't a thing the matter with the machinery of production. The only thing that is the matter is that for some reason, principally idleness and selfishness, we have apparently made up our foolish little minds that we can take a head-on-dive into the pools of pleasure and at the same time totally disregard the Biblical injunction: 'In the sweat of thy face shalt thou eat thy bread.' If you don't believe this statement, just generate enough energy to get up early enough in the morning in the great city of New York, or anywhere else, and gaze around the streets and see what is going on. The catacombs of the ancient world have nothing on some of our principal thoroughfares at 7 o'clock in the morning. They are equally free from active life.

"What we need is a thorough awakening on the part of both men and women to a realization of the fact that God Almighty has put us in a world filled with opportunities—in a land where the raw material and the milk and honey of our environment of unspeakable excellence is ours for the taking if we will only do the thing that He has commanded us to do, namely, work. What we need is to dethrone the image of 'Idleness' and in its stead to place upon our national pedestal that of 'Work,' consecrating ourselves to the faith of our forefathers, who, through sweat, grime and whatever was needed, built a principle into American life which we are apparently bound on destroying.

"We need to get back to the practice of the simple faith that we find in the religious expressions of those who bore the brunt of our early development.

"Above all and beyond all we need to get back to constant, honest and unremitting work, than which there is no greater privilege or more glorious blessing."

We do not always agree with some of the financial advice issued by bankers, but the statements bearing on the fulfillment of contracts and those in the same circular emphasizing that this country must get back to the simple faith and religious life of those who bore the brunt of our earlier development we unhesitatingly endorse to the extreme.

One point which must be taken into consideration is the fact that sellers often overpersuaded buyers to order a larger amount of goods than they needed on the ground that the demand was so great that no contract could be filled in full, and that, therefore, a buyer must order two or three times as much as he really expected to get. This is often done in financial matters, when men are urged to subscribe in larger amounts of securities than they are able to pay for or expect to get on the ground that they must do this in order to get the allotment which they really need. The sellers, therefore, of securities and of products are to a considerable extent guilty of having been responsible for bringing about a condition which caused the buyers in so many cases to lay down on their contracts. Both sides are to blame, but both sides must learn that the supreme issue in all business interests is that of commercial honor, which compels the seller to deliver the goods bargained for at the price agreed upon, even though the price may have tremendously advanced, and which compelled the buyer to take the goods purchased, though the price may have greatly declined.

It has long been the custom, and an unfortunate and dishonest one at that, for sellers of some products, when the price rose rapidly, to accept cash orders for immediate delivery while holding back the fulfillment of orders which they had had on their books for many months.

The coal trade was to a large extent guilty of what was in reality criminal profiteering, not only profiteering in the ordinary sense, but criminal guilt which ought to have sent many

a man to the penitentiary for the refusal to deliver coal for which he had accepted contracts in good faith, because he could sell coal for spot delivery at a higher price than previously sold on contract.

Through the whole ramification of business there has been a lowered tone of morality, and the country is paying for it. It behooves the honest men of this country, men who have its reputation and morality in business at stake, to unite against practices on the part of the seller or the buyer which are a disgrace to the nation and which sow the seeds of disorder and faithlessness in business, which ultimately leads to faithlessness in life in every particular.

Men who love honor and truth must unite to put down the evil practices which have grown up since the war and once more rebuild the national reputation for commercial honor, because upon that rests the question of individual and national morality, without which civilization would lapse into barbarism.

ANOTHER MISTAKE BY BALTIMORE BANKERS

"THE MANUFACTURERS RECORD of our city has been conducting a crusade against what it claims the mistaken policy of the Federal Reserve banks in not encouraging the holding of cotton and grain by making further advances against such products at a low rate of interest, and is publishing articles from correspondents confirmatory of its assumed position and conditions.—Financial Letter of Nelson, Cook & Co., Baltimore bankers.

Now, Nelson, Cook & Co. are wholly in error and show that they are very poor financial advisers. The MANUFACTURERS RECORD has made no fight to have the Federal Reserve Board encourage "the holding of cotton and grain by making further advances against such products." But for somewhat similar errors in the past we would have been surprised that such a banking firm could have made such an egregious blunder. The MANUFACTURERS RECORD has persistently fought the plan of the Federal Reserve Board to bring about a radical restriction of credits, which we knew would inevitably lead to the destruction of billions of values, would destroy national prosperity, break down wages and throw millions of people out of employment. The disastrous effect upon cotton and grain was only one by-product of this unwise attempt to deflate the inflation which had gone on for four years. The only safe road to deflation was a gradual one, which was as clear as noonday to any intelligent man who cared to study the financial history of former wars. We know that many men, bankers included, want to break down, or, as they said "liquidate" wages, but morally that was a false and rotten doctrine to preach, and it was and is, moreover, a very dangerous doctrine in these days of world-wide bolshevistic activities, if viewed from no other than that standpoint.

Do Nelson, Cook & Co. approve the acts of the Federal Reserve Board in making banks call loans on Government bonds when the Government, the Treasury Department and the banks constantly begged people to subscribe, promising that the banks would carry them until the bonds could be paid for out of earnings?

Do Nelson, Cook & Co. approve this thoroughly dishonest breaking of the nation's honor and the pledge of the bankers which started the down-grade movement of business?

Do they endorse the action of thus breaking down these bonds by the Secretary of the Treasury and his associates on the Federal Reserve Board, and then boast of the Treasury Department that it had bought in two billion of these dishonored bonds at a big saving over the issuing price? In commercial life people who do such things are regarded as proper subjects for the criminal courts.

Having begun by violating every pledge made to bond buyers, the same influences then began a campaign to openly and persistently say that prices must be broken down and credits must be curtailed. Are Messrs. Nelson, Cook & Co.

and the public satisfied with the results which are now seen in business?

Any man who definitely knew that the board did not intend to change its deflation campaign could have made millions on millions without the slightest trouble.

OUR IMPORTS AND EXPORTS.

THE most interesting fact connected with the report of our foreign trade for October is the heavy increase of imports from and exports to Germany. During October we imported from Germany over \$8,000,000, while we exported to that country for that month \$32,449,265, making a total of exports for ten months of \$217,937,288 to that country.

The total values of merchandise imported from and exported to each of the principal countries during October and the ten months ended October, 1920, compared with corresponding periods of the preceding year, were made public today by the Bureau of Foreign and Domestic Commerce, Department of Commerce, as follows:

Imports from:	Month of October, 1920.	Ten mos. ended October, 1920.	1919.
Grand Divisions—			
Europe.....	\$87,802,117	\$90,373,210	\$1,003,373,197
North America.....	101,174,401	109,278,333	1,472,631,686
South America.....	47,369,425	68,262,827	684,978,335
Asia.....	74,572,961	118,762,928	1,138,319,376
Oceania.....	22,645,250	13,547,730	174,167,756
Africa.....	699,649	1,620,132	143,822,687
Total.....	\$334,263,803	\$401,845,150	\$4,692,283,037
Principal countries—			
Belgium.....	\$4,307,236	\$1,250,398	\$40,159,664
Denmark.....	1,119,074	526,936	1,960,590
France.....	11,749,406	14,065,694	142,047,441
Germany.....	8,021,701	2,157,608	72,771,411
Greece.....	1,016,312	1,965,878	17,883,044
Italy.....	4,365,360	7,224,329	65,348,634
Netherlands.....	6,816,895	9,180,230	81,677,485
Norway.....	1,718,047	439,222	17,044,965
Spain.....	3,629,381	3,376,864	34,434,247
Sweden.....	2,947,673	2,690,423	23,930,742
Switzerland.....	4,217,559	2,554,102	47,858,542
United Kingdom.....	33,617,133	41,718,294	467,639,794
Canada.....	71,541,276	55,596,560	489,187,957
Central America.....	2,443,150	3,093,009	62,476,967
Mexico.....	12,968,001	12,271,375	148,939,566
Cuba.....	11,265,090	34,874,826	693,994,386
Argentina.....	14,971,430	23,773,398	190,224,534
Brazil.....	14,498,109	24,171,680	205,370,227
Chile.....	5,807,230	5,704,025	106,805,857
Uruguay.....	592,786	3,783,598	31,839,435
China.....	9,613,252	19,368,411	179,523,484
British India.....	11,609,280	19,818,070	161,755,321
Dutch East Indies.....	19,258,759	7,835,399	111,270,655
Japan.....	21,223,735	48,171,942	387,133,597
Australia.....	2,222,989	4,205,656	41,971,562
Philippine Islands.....	15,027,692	6,076,609	101,894,265
Br. South Africa.....	209,962	268,354	19,205,590
Egypt.....	5,638	67,385	93,678,527
Exports to:			
Grand Divisions—			
Europe.....	\$432,882,748	\$407,101,891	\$3,721,217,098
North America.....	173,238,802	117,897,407	1,598,192,445
South America.....	59,827,556	39,287,045	491,356,725
Asia.....	45,898,163	49,895,070	675,161,245
Oceania.....	25,765,168	11,210,575	212,747,559
Africa.....	17,116,133	6,226,461	133,647,348
Total.....	\$751,728,570	\$631,618,449	\$6,832,323,420
Principal countries—			
Belgium.....	\$16,382,061	\$32,342,621	\$237,345,560
Denmark.....	7,440,473	11,342,621	72,642,324
France.....	79,092,926	67,494,672	579,179,343
Germany.....	32,449,265	20,663,521	217,937,288
Greece.....	1,417,089	2,592,816	21,703,846
Italy.....	35,693,826	31,871,737	312,825,745
Netherlands.....	33,491,166	20,357,776	182,067,515
Norway.....	7,733,569	18,485,843	82,813,992
Spain.....	18,443,559	8,344,700	113,972,094
Sweden.....	9,081,143	7,879,599	99,810,214
Switzerland.....	6,368,145	4,068,831	38,895,397
United Kingdom.....	169,973,621	164,955,782	1,561,669,174
Canada.....	86,643,891	67,598,718	841,193,156
Central America.....	6,973,714	4,623,759	70,895,975
Mexico.....	20,762,596	9,942,552	152,715,393
Cuba.....	51,884,014	27,357,181	411,961,865
Argentina.....	21,858,448	13,874,154	164,474,845
Brazil.....	15,143,613	12,379,091	120,259,361
Chile.....	4,867,920	3,449,293	42,139,485
Uruguay.....	3,227,547	1,905,116	27,083,945
China.....	12,841,739	7,090,736	121,418,830
British India.....	8,534,115	5,733,791	83,359,941
Dutch East Indies.....	6,113,544	3,577,471	42,989,296
Japan.....	12,067,012	19,658,946	350,585,960
Australia.....	12,319,392	4,800,019	94,296,793
Philippine Islands.....	8,212,981	4,133,420	79,132,831
Br. South Africa.....	6,334,791	2,746,277	48,885,527
Egypt.....	2,297,124	1,506,028	32,818,370

MR. TAFT SEES A NEW LIGHT.

FORMER PRESIDENT TAFT, in an editorial contribution to the Philadelphia Ledger of December 3, referring to some resolutions which had been introduced into the League of Nations meeting, said:

"It develops that one of the resolutions is intended to bind the nation by the acts of its delegates in the Assembly or in the Council. Mr. Rowell, the Canadian delegate, maintained that this was the real meaning of the Covenant, and that the resolution only declared it. Mr. Viviani, the French delegate, is reported to have agreed with Mr. Rowell.

"If Mr. Rowell's view is correct, then it must be admitted that the Covenant means something very different than what its supporters in this country have thought it would mean, and that the fears of its opponents as to its effect are better founded than the American supporters of the treaty have been willing to admit. * * *

"The United States could not accept such an interpretation or act under it, because its delegates only represent the Executive of the nation, and cannot bind the nation to action requiring Senatorial or Congressional authority. * * *

"Now that the Assembly is sitting, the variety of interpretations given to the Covenant and the unexpected character of some of them make the need for a clarification and revision of it much more apparent."

We are glad that Mr. Taft is at last seeing the light. The opponents of the League of Nations have seen all of these facts from the beginning, and they have been amazed that a man of Mr. Taft's supposed legal acumen could possibly fail to see them.

Mr. Taft now recognizes the fact that if the view expressed in the Assembly of the League of Nations be correct, then the Covenant means something very different from what its American supporters had supposed, and he admits that the fears of its opponents in this country are better founded than he and others who favored the Covenant have been willing to see.

To all thinking men who have cared to study every phase of the Covenant, Mr. Taft's admission seems to be rather late in the day. The Covenant has illimitable possibilities for evil far greater than even those which Mr. Taft now admits can only be obviated by classifications and revisions.

Of all the documents ever penned by human hands, probably none was ever written susceptible of more interpretations than the Covenant of the League of Nations, and these interpretations could be such that no man on earth could possibly foretell all the evils which would arise from the acceptance by the United States of the Covenant.

The reservations demanded by the Senate were the mildest that could possibly be considered by people who had any conception of the potentialities for evil involved in the League of Nations, and who are not willing to see the United States definitely tied up in such a proposition which probably no two countries would interpret alike.

Beyond Anyone's Understanding.

W. E. STUBBS, Cashier, Bank of Belhaven, Belhaven, N. C.—Your articles cover the whole financial trouble at the present time. I have never been able to understand why men holding as responsible position as the members of the Federal Reserve Board should not be able to distinguish between legitimate business expansion and inflation.

HOLDING COTTON.

THE Charlotte Observer, referring to the report that North Carolina and South Carolina are the only States in the cotton belt which are withholding cotton from the market, says:

"Naturally if Southern States are selling against the holders in North Carolina and South Carolina, the farmers in the latter States are making their sacrifices to small effect."

The Observer views the matter, we think, from the wrong standpoint. If the Carolinas are withholding their cotton while other States are selling, every sale made by other States makes more sure the profit and prosperity of Carolinas' cotton holders. As other States sell cotton they are simply strengthening the position of those who hold cotton in reserve, for an improvement in the price is absolutely certain. Just how soon it will come nobody can say, but when such a staple as cotton, which can be carried without injury to the fibre for twenty-five years or more, is selling far below the cost of production, economic conditions will absolutely force a higher range of prices later on. This will come, either by an increased demand from the world for the present crop, or by a curtailment of next year's crop, or by a combination of both, but the man who refuses to sell cotton at present prices is certainly safe if he can carry his staple long enough to get a better price some time in the future.

WHY PUBLIC IMPROVEMENTS SHOULD BE MADE NOW.

REFERRING to the improvement in the bond market demand for "municipals," as the issues for all public works are known in the "street," the Florida Times-Union, of Jacksonville, counsels the people in towns, villages and counties of that State to undertake essential public improvements now. Along this line it says:

"There are, of course, thousands of miles of roads to be constructed, and the accepted plan in counties that have already given some attention to this matter is to issue road bonds. And then there are numbers of places where street improvements are needed; the necessity for sewerage and drainage, and things essential to the health of the people. It is proper to issue bonds for these when a failure to do so will result in great loss.

"It should not be construed that we are advising an orgy of spending, or that we suggest that Florida go into the business of borrowing all the money possible and throwing it around. Far from such a recommendation, we would be understood as advising against the expenditure of a dollar more than needed, but we are sure that many of the improvements and new features mentioned, all of which would add to the comfort and attractions of the various places where the money was spent, are due to the people. They have a right to expect the municipal and county authorities to plan and provide for essential improvements, and the general distribution of the burden of paying for them is proper if necessary. Where essential improvements will steadily increase the value of property and enlarge the area from which the money is to be collected they should be made.

"County and municipal bonds pay somewhat better than the savings banks can afford to allow on large deposits if the soundness and certainty of interest payments is not questioned. In this State certainly no municipal or county bonds have ever been defaulted.

"Florida has a great deal of work to do of many kinds, and the towns, cities and counties and special road districts can well be looking into essential building and construction projects."

The advice of the Florida Times-Union is sound and it is right in line with the advice of the MANUFACTURERS RECORD, recently expressed, when it said that preparation should be made immediately for a spring campaign of improvements wherever new public works were required, and especially as to roads. Little may be gained by waiting for lower prices for materials, for there is great uncertainty as to the time and extent of any considerable reductions; on the contrary, much may be gained by grasping the opportunity to market bonds at good prices, and thus being all the sooner able to enjoy the advantages of improvements.

EXPORT BANKS MAY MARK A NEW ERA IN OUR INTERNATIONAL TRADE.

THE theory of international trade has usually been presented to America in elementary form. America, so the argument ran, would send goods worth so much to other nations, and the other nations would send their goods, worth so much, to America. There would be a difference, usually in our favor, and that would be the money used to pay the interest on the debt we owed Europe. Goods for goods!

The truth is, of course, that foreign trade is more complex than that. England for generations sent us far more than we could pay for in products. She exported to us capital. So did Holland and France. We did not give good goods for the money. We gave stock in our railroads, in our mills and factories, ownership in our lands, etc.

Europe owes us money, but it is not true that we can secure payment only by buying Europe's goods in greater volume than we sell. We can furnish her capital, just as she formerly furnished it to us. We can invest in her mills and factories, her public utilities, her various industries. We can sell rails for her railways and take bonds in payment. We can sell ships and take stock in the purchasing companies. We can equip her cities with electric plants and take part ownership in whole or part payment. International trade is more than a mere exchange of goods. It involves also an exchange of interest in productive enterprises in return for capital.

The great banks now being organized under the Edge law for facilitating American export trade will deal in long-term securities. The one formed in Chicago with a capital of \$100,000,000 will acquire great and permanent interests abroad. It will sell its debentures to the American people. It will employ its resources to get quick money for individual American sellers, but will itself be doing a long-range business, the kind of business that looks far into the future for its profits, and when it gets them finds them big. Not very different will be the great export bank organized in the South to assist in the financing of cotton exports. But it will probably deal in shorter credits than the Chicago organization.

Both of the new institutions will be materially aided in their infancy by the War Finance Corporation, we have no doubt. It takes a little time to educate the public to have confidence in foreign trade transactions. A campaign of education for the purchase of export bank securities might take a long time, ordinarily, but with a Government agency such as the War Finance Corporation in the field, public confidence ought to be won quickly.

It is important that the South achieve its financial independence. This can only be brought about by organization and co-operation and by the practice of sound business principles. It is sound business to help along an anxious and prospective buyer. We look to these export banks, therefore, to become an increasingly important factor in American commercial life. It is probable that they will grow rapidly and pass from the infant into the adult stage within a few years. The billions that England has invested abroad virtually saved her during the great war. The same is true of France. We are strengthening our defense as well as demanding hostages for our future prosperity when we entrust our capital to foreign investment. Nor can it be doubted that one dollar judiciously expended abroad at this time in the extension of commercial credit to the private organizations of countries which will for years be our customers will be worth to us in the long return ten times as much invested at home.

TIMES HAVE CHANGED, BUT THE WORKING OF THE CURRENCY SYSTEM HAS NOT.

THERE was a panic in 1907, and a student of public affairs at that time discussed it. Among other things he said:

"The abominable currency system under which we are staggering, and have been for years, is responsible for the present tightness of money."

Tightness of money! Why, that is what has caused the trade slump in this year 1920. It is a tightness of money which has been heralded far and wide as the key to the Government's entire financial program. Tight money! Money made tight by arbitrary decree of the Administration presided over by Woodrow Wilson, President of the United States.

The student who made the statement above referred to in reference to the 1907 panic was Woodrow Wilson, president of Princeton University.

HOME-OWNING SUGGESTIONS.

MR. G. W. SOULE, president of Soule Steam Feed Works, Meridian, Miss., in further discussion of his views on home owning, writes:

"I do not at all believe that 'every dwelling-house should be exempt from taxation.' My idea is that every home, which is used by its owner as such, and is of moderate value, should be exempt. I do not think that rented houses should be exempt, but that they should pay their due share of taxation. My idea is not to make dwellings cheaper, but to encourage all to own their own homes by making it less costly to live in one's own home than a rented one.

"Everything possible should be done that legally can be done to encourage everyone to have a property stake in our country. The owning of the home is usually the first step to the accumulation of property. A property-owner is the last to go 'Bolshevik' and the one most certain to support orderly government in all ways.

"In regard to the national income tax, my opinion is that corporations as such should be relieved from income tax. The income of corporations passes to individuals, and should be assessed as income of the individual, and a sufficiently high graduated tax should be collected to cover the needed income, the graduation being such that the very large incomes would pay a very large proportion of the tax."

The Baltimore News, over an article describing the plan to cut the cotton acreage in the South, carried this headline: "Big Cotton Crop—Memphis Man Says U. S. Will Raise 6,000,000 Bales in 1921." Pretty big—just half as big as this year's crop. The country will be better off when it has more editors who can tell the difference between a flea and an elephant.

The Chicago Federal Reserve Bank last week called on its member banks to call in more agricultural paper. If they keep on announcing such moves publicly it will embarrass the Federal Reserve Board in Washington, the head of which testified that only a few people would ever have known about the deflation orders of the Richmond Reserve Bank if the MANUFACTURERS RECORD had not printed the facts.

Relief Is in Sight.

J. C. STANCH, General Contractor, Smithfield, N. C.—I mailed you check for subscription on November 27. If you have not received the check, let me know at once, as I don't want to miss a single issue of the MANUFACTURERS RECORD.

Your editorial in the issue of November 25 entitled "Sure Omens of Prosperity" is worth the price of a year's subscription. I consider this a very timely article indeed. If the people of this country can be brought quickly to a realization of the fact that hope is in sight for relief from these panicky conditions brought about by the unwise action of the Secretary of the Treasury and the Federal Reserve Board, it will be an easy matter to throw off the yoke of pessimism and "get back to business" just as soon as this bunch of fanatics can be pushed off our "sore toes." Keep up the good work.

ACTIVITIES NOTED THROUGHOUT THE SOUTH

FIRST SIGNS OF BUSINESS REVIVAL.

CHAOTIC conditions, depression and pessimism in business which have been with us for some months, gathering in intensity as the fall advanced, will soon give way to a revival of trade if the optimistic tone now beginning to appear in the press and views of business men throughout the country becomes universal. Optimism and faith are necessary before anything can be successfully achieved. Pessimism in one form or another is the birth of every period of depression, while the spirit of optimism precedes and stimulates the actual revival of business operations.

The buying public, because of the pessimistic utterances and reiterated assertions by Governmental agencies that the prices of commodities must fall, of course stopped buying, and who wouldn't under similar circumstances? Therefore, the stoppage of trade has been brought about mainly by artificial means, or in a sense a manipulation of the market, and not because of any real economic reason. The public is beginning to realize this, and because many things that should have been bought before this are now absolutely necessary to the buyer and must be purchased, prices or no prices, optimism in business is becoming apparent, which presages actual business revival.

B. F. Avery & Sons, Inc., plow manufacturers of Louisville, Ky., in its publication "The Center Shot," contains a letter written December 1 by President C. F. Huhlein on "What About the Business Future?"

Among other timely things, Mr. Huhlein says:

"Very suddenly we find the business of our country once more in the midst of trying conditions. Business men are feeling 'blue,' and the nearer their dealing are with the farmer, apparently, the 'bluer' they are, due to the natural and, in many respects, justifiable, discouragement prevailing among the farmers at this time. However, the writer is cheered by the recollection that these periods of depression are nearly always short-lived, and **after they are clearly recognized, as at present,** the mending process begins, and before many months, and usually before many weeks, confidence is restored and we find business on the up-grade.

"Our country has been blessed with abundant crops of nearly every kind, and in almost every locality. We are not suffering famine, destruction or political chaos and anarchy, such as prevails in many lands across the sea. **The resources of our country, and of individual citizens, were never so great.**

"We have every reason to believe that there will be a general resumption of business, in an active and healthy way, in practically all staple lines about January 1. There will not only be a good demand for new implements, but an especially heavy demand for all classes of repairs. The dealer who prepares for the demand and confidently works to effect sales, is likely to come very near doing a normal business, especially if his competitor is pessimistic.

"As to the matter of collections. This is a time when the dealer can show a helpful spirit to the farmer and when the manufacturer can, and should, show a helpful spirit to his dealer customers. We are prepared to do our part, both in this matter of meeting our dealers in a liberal spirit on collection matters, and in providing, as we are now doing, liberal stocks of goods, subject to dealers' calls.

"We have been in business long enough, and you have, to remember that no matter how serious the scare and let-up in business at times, that the best capital is faith, courage and absolute reliance on the certainty of a revival and good business sooner or later. Let's work and prepare for this revival, which is quite certain to begin in January next. There is every reason to believe that such confidence and preparations are justified and will be amply rewarded.

"He that observeth the wind will never sow; and he that regardeth the clouds will never reap."

Great Program of Industrial Development and Expansion Under Way in Baltimore.

Baltimore industrial activities are being pushed with practically unabated vigor, and within the next few weeks several large new industrial plants will be completed and placed in operation and the forces of others increased, thereby giving work to many thousands of employees. There has been some reduction in the number of employees of several concerns, but this has been due largely to seasonal demands rather than to a slump in production activities. The number temporarily laid off has been largely offset by the number needed for the operation of new enterprises. However, labor is more plentiful than for some months, with the customary sequence of increasing efficiency.

The huge plant of the Columbia Graphophone Manufacturing Co. at Orangeville will be completed shortly, probably just after the first of the year, and will be placed in operation immediately. The first unit of this plant, which is now about ready for operation, the buildings having been completed and machinery now being installed, will require when in operation at capacity upwards of 5000 employees.

Work will be started within a week on the \$1,500,000 office building for the Standard Oil Co., and also upon the addition to the United States Fidelity & Guaranty Co., to cost \$250,000. Likewise, extensive improvements to cost more than \$100,000 are being made to the building purchased recently by the Merchants and Manufacturers' Association on Light street and to the building formerly occupied by the Merchants & Miners' Transportation Co. at Light and Redwood streets, which will be occupied by the Commerce Trust Co. These improvements will cost approximately \$125,000.

Construction work is progressing rapidly upon the building being erected by the American Sugar Refining Co. and the Coca-Cola Company in the Locust Point section. There has been some slackening in activities at the sugar refinery, but with the opening of spring work will be renewed on an extensive scale. The Western Maryland Railway Co.'s coal pier at Port Covington is being rushed to completion. Likewise, the plant of the Locke Insulator Co., at Light and Cromwell streets, which will cost in the neighborhood of \$1,000,000, is practically complete. Machinery is being installed, the buildings completed, and the plant will probably be placed in operation shortly after the first of the year, giving employment to perhaps as many as 1000 persons. J. Henry Miller, Inc., has the general contract for construction.

Construction work is progressing upon a large reinforced concrete factory building for the Whitaker Paper Co. at Saratoga street and Guilford avenue by the Turner Construction Co. of Philadelphia. The new warehouse and office building of the Goodyear Tire & Rubber Co., on the Baltimore & Ohio Railroad siding on Dickson street just east of Mt. Royal avenue at Lafayette avenue, is practically complete, and will shortly be occupied. This warehouse will be used as the Eastern distributing point for the Goodyear organization, the site in Baltimore having been selected by the rubber people because of the excellent shipping facilities afforded. Rullman & Wilson of Baltimore has the general contract for construction of the building, which is a four-story structure of brick, concrete and steel construction.

In the fertilizer industry many new factories have recently been completed and placed in operation, and others are fast nearing completion. This season of the year is always a dull one in the fertilizer manufacturing business, and most of the companies run their plants with just as few men as possible, giving their attention to mixing goods that are used in making the finished products when the buying and shipping season get under way later on. It is believed that this business will start up after the first of the year, and that accordingly many men will be given work. The Swift & Co. plant, on Curtis Creek, has about completed an extensive addition to their storage facilities. This work was done by the A. F. Fedeli Company of Baltimore, and consists of an all-steel and concrete structure with corrugated sheet-iron sides. The Armour Fertilizer Works plant, on the upper part of the creek, has recently been placed in operation, having been completed by Westinghouse, Church, Kerr & Co., Inc., of New York. It was designed and erected under the direction of the Armour

engineers and Dwight P. Robinson & Co. In the same section the Piedmont-Mt. Airy Guano Co.'s plant is fast nearing completion. This plant was fully described in a recent issue of the MANUFACTURERS RECORD. It was designed and erected by the Chemical Construction Co. of Charlotte, N. C.

Similarly the large plant of the Standard Guano Co., Inc., in Curtis Bay, on Cabin Branch Creek, is being rushed. This plant consists of an all-steel and concrete structure of about 200x400 feet. It is equipped with two Shepard cranes, with a span of 80 feet over two separate bays running the length of the building. The Shoemaker-Satterthwait Bridge Co. of Pottstown, Pa., furnished and fabricated the steel. Adjoining is the plant of the Union Acid Works, Inc., for the manufacture of sulphuric acid, the first unit of which will be placed in operation early in January, and the remainder will be completed as speedily as possible.

The huge steel-car plant of the Baltimore Car & Foundry Co. recently made extensive improvements to its already large plant on Curtis avenue, and machinery is being installed. This company has been specially occupied in the production of all-steel cars and the manufacture of similar pressed-steel products.

The various oil companies in the Baltimore section are going ahead with improvements, many of them to continue at present speed of operations throughout the winter months. The manner in which these improvements are being made typifies building construction in Baltimore. The buildings are of brick, steel and concrete construction, entirely substantial and fireproof, and their appearance of permanency stands out strikingly as an evidence of the industrial prosperity of Baltimore.

The Consolidated Gas, Electric Light & Power Co. is adding extensive improvements to its gas-making and storage facilities at Spring Gardens to take care of expanding business, besides continuing improvements to big Westport steam-electric station and the construction of electrical substations for caring for demands in various sections of the city.

The N. W. James Lumber Co. has recently completed extensive improvements to its plant on Alicanna street, and has placed in operation a large and modern planing mill. Material coming into the building is handled by crane which rises through the center of the structure and has a boom of 70 feet length. Similarly John H. Geis & Co., at the south end of Hanover-street bridge in Brooklyn, is erecting a large frame office building and warehouse.

The General Electric Co. has placed in operation its new Baltimore plant, which occupies the former Park plant of the Bartlett Hayward Company on Columbia avenue, in the southwestern part of the city, and 1000 workmen are now employed in the manufacture of switchboard equipment. This number will be increased as necessity demands.

The fulfillment of the construction program being planned under the \$51,700,000 bond issue recently voted will give employment to many persons. At least two large new school buildings are to be erected and extensive improvements made to present structures. Probably as much as \$4,000,000 will be expended within the next year in paving in the old city and the new annex through funds provided for construction of bridges and paving of new streets. Improvements will be made to the water supply facilities at large cost, and plans for aiding the work of dredging the harbor channels are progressing.

House building is making good progress, considering the season of the year. High prices have somewhat retarded building activities of this nature, but the public now seems reconciled to high prices and believes they will remain; hence next spring builders and contractors look for one of the biggest years in construction the city has ever experienced. Architects are now working on numerous plans, many of them for large and costly structures, which will probably be started with the opening of spring.

A chamber of commerce has been organized at Canton, N. C., with the following officers: W. L. Snyder, president; J. A. Osborne, vice-president; W. S. Elias, secretary; T. J. Cathey, treasurer.

The city of Norfolk, Va., plans a civic center to include a new municipal building to house the council chamber and the various offices of the city government, possibly an auditorium and new market, also an additional system of thoroughfares leading from all sections to the civic center. The details of the plan are now complete, but have not been made public.

Refining and Handling Facilities of the Gulf Coast District of South Texas to Be Further Increased.

Houston, Tex., December 13—[Special.]—Numerous oil pipe line systems connect ocean terminals, refineries and storage tanks in the Gulf coast district of South Texas with the producing fields of North Texas and Oklahoma. The pipe line of the Humble Pipe Line Co. extends from Texas City to Stephens county, while another line extends from the Webster tank farm, near Texas City, to West Columbia. At Texas City large shipping facilities have been provided, and over 1,000,000 barrels of Ranger and coastal crude are shipped every month to refineries on the North Atlantic coast.

The Texas Company has a double pipe line extending from Port Arthur and Port Neches to Oklahoma, with lines to Stephens and Wichita counties, tapping the two big producing areas of the northern section of the State. Another line extends into Louisiana. The company has three refineries at the southern terminus—a 36,000-barrel plant at Port Arthur, a 14,000-barrel refinery at Gates and a 15,000-barrel plant at Port Neches.

The Magnolia Pipe Line Co. also has a double line extending from Beaumont to Oklahoma, with lines to Stephens county and Wichita county. At Beaumont there is a 50,000-barrel plant, and at Fort Worth a 12,000-barrel plant.

The Gulf Pipe Line Co. has a double line extending up through the eastern part of the State of Oklahoma and Louisiana and west to Stephens county. This line connects with the Gulf Refining Co.'s 60,000-barrel refinery at Port Arthur. At Fort Worth there is a 15,000-barrel refinery.

Numerous short lines concentrate in the Houston district. The Texas Company has a line from West Columbia to Clinton, on the Ship Channel. The Gulf Pipe Line Co. has a line from Houston to Lynchburg, and there are several lines into Goose Creek. Projected lines include a 45-mile trunk line from Damon Mound to the Sinclair refinery on the Ship Channel, work on which is now being carried on, and a line from Blue Ridge to Lynchburg by the Gulf Pipe Line Co. The Humble company is also to build a pipe line from its refinery at Baytown, on the Ship Channel, to a connection with its trunk line running from Stephens county to Texas City.

Great gathering systems are maintained by all four of the major pipe line companies reaching the Gulf, and there is hardly a producing field of any consequence that is not touched by these gathering lines.

Refineries in the Gulf coast district, taking in those of the Beaumont-Port Arthur district of South Texas, constitute nearly 50 per cent of the refining capacity of the State. A compilation of Texas refineries shows a total refining capacity of 447,550 barrels. Of this total, refineries of the Houston district have 219,900 barrels capacity.

On the Houston Ship Channel there are 11 refineries, with a combined refining capacity of 33,900 barrels. Planned increase of capacity amounts to 61,000, making a total refining capacity when projected additions are made of 95,500 barrels. The refineries on the Ship Channel are as follows: Deep Water Oil Refiners, 1200 barrels; Crown Oil & Refining Co., 5000 barrels; Galena-Signal Oil Co., 5000 barrels; Humble Oil & Refining Co., 12,000 barrels; Palmer Hughes et al., 500 barrels; Keen & Woolf, 1000 barrels; La Porte Oil & Refining Co., 500 barrels; Pa-Tex Petroleum Co., 1000 barrels; Sinclair Refining Co., 5000 barrels; Transatlantic Petroleum Co., 1500 barrels; Turnbow Oil & Refining Co., 1200 barrels.

Projected extensions of plants on the Ship Channel include the following: Humble Oil & Refining Co., 48,000 barrels, making the finished plant 60,000 barrels; Deep Water Oil Refiners, 800 barrels, completing a 2000-barrel plant; La Porte Oil & Refining Co., 500 barrels, or 1000 barrels completed; Sinclair Refining Co., 10,000-barrel extension, making the completed plant 15,000 barrels; Transatlantic Petroleum Co., 1000-barrel addition, making the completed plant 2500 barrels, and Turnbow Oil & Refining Co., 1300-barrel extension, completing the plant at 2500 barrels.

The present refining capacity of the plants of the Port Arthur-Beaumont district is 175,000 barrels, as follows: Gulf Refining Co., 50,000-barrel plant at Port Arthur; Texas Company, 14,000-barrel plant at Gates, 36,000-barrel plant at Port Arthur and 15,000-barrel plant at Port Neches, a total of 65,000 barrels re-

fining capacity, and Magnolia Petroleum Co., 50,000-barrel plant at Beaumont.

At Texas City the Pierce Oil Corporation has a 5000-barrel plant, and is planning to double the capacity and build a canning plant.

The Seaboard Oil & Refining Co. has a 2500-barrel plant at Orange, and the National Oil & Refining Co. has a 900-barrel refinery at Humble.

\$1,000,000 OIL EXPORT PLANT FOR NEW ORLEANS.

\$5,000,000 Company Organized by Chicago Interests for Erection of Refinery and Large Can, Case and Cooperage Factory to Handle Output.

An initial investment of more than \$1,000,000 will be made in St. Charles parish, about 16 miles above New Orleans, La., for the erection of a great oil refining and export plant by the Carson Petroleum Co. of Chicago, a \$5,000,000 company having been organized for the purpose. Work on construction of the plant is expected to begin in the near future.

The lot which the company will occupy contains 500 acres and has a wharfage front of 3000 feet. On tankage facilities alone the company is planning to expend \$180,000.

An extensive can, casing and cooperage plant will be erected for use in barrelling and canning oils. The can factory will have a daily capacity of 20,000 five-gallon cans, the cooperage factory a daily capacity of 5000 cases and the barrelling plant 5000 barrels daily, with sufficient tankage to accumulate various grades of oils from the Oklahoma fields.

The Carson Petroleum Co. wires the MANUFACTURERS RECORD from Chicago that the plant will be erected as above outlined, the Chicago officers being: Edward B. Carson, president; C. W. Carson, vice-president and general manager; Charles Ephgrave, secretary. Thomas D. Huff is attorney, with Chicago offices at 29 South La Salle street.

Plans of the company as given out in a statement from New Orleans are as follows:

"The operation of our New Orleans plant will give the independent oil refiners in Oklahoma, Texas and Louisiana a new outlet for their production, and will insure the movement for export of a tremendous quantity of petroleum products from these territories, which have heretofore been largely supplied through Eastern ports.

"A complete conveying system for the handling of all material from cars which enters into the manufacture of the containers, and for the handling of cargoes from the plant into the hold of a ship, will make possible a continuous process of manufacturing and loading. This conveying system will minimize breakage and leakage, and will make it possible to load cargoes ranging from 100,000 to 250,000 cases in one-fourth the time required under the old system of handling.

"The Carson Petroleum Co. is at present marketing the entire output of a number of Western refineries, and our new facilities at New Orleans will allow us to meet demands for a large increase in export business, especially to Central and South America and the Orient, which heretofore has not passed through the port of New Orleans."

\$400,000 Company to Develop Arkansas Delta Section.

Memphis, Tenn., December 13—[Special.]—The Arkansas Plantations Co., with a capital of \$400,000, has been organized in Desha county, in the southeastern part of the State, to develop idle bottom lands in that section and bring them by scientific methods to the highest state of productivity. More than 4000 acres of land already has been acquired, and this will be developed first. The region in which the company will operate is in the delta or alluvial soil section, the land in which is very fertile and enormously productive. It is protected by levees from overflow, and the territory has excellent drainage and good water, combining for good health. Officers of the corporation are George R. Lacy, sheriff and tax collector of the county, president, Arkansas

City; R. L. Byrn, secretary and assistant general manager, Winchester, Ark., and L. R. Byrne, banker, Dumas, Ark. Directors include many of the best-known business men and landowners in the district, as well as several Little Rock and St. Louis business men and capitalists.

Notable Industrial Activity Reported by Memphis.

Memphis, Tenn., December 8—[Special.]—A number of important new industries have located in Memphis during the past few weeks, according to the monthly review just issued by Mark Fenton, industrial commissioner of the Chamber of Commerce.

The Memphis Iron & Steel Co., the first concern of its kind in this part of the South, have begun operations in the first unit of their large new plant. They will at first roll bars and round iron, and will later roll heavy steel for construction work. Their officers are: B. L. Mallory, president; J. E. Conley, vice-president; P. J. O'Hara, manager, and E. M. Baumgarten, secretary.

The Austin Machinery Co., who handle road-making machinery, steam shovels, cranes, and practically all kinds of dirt-handling devices, have arranged to open a distributing branch here. Their main factories are at Muskegon, Mich.; Harvey, Ill.; Buffalo, N. Y.; Toledo, O., with headquarters in Chicago. J. M. Campbell, formerly of Philadelphia, will have charge of the Memphis branch.

The Phanotax Chemical Co., incorporated under the laws of Delaware for \$500,000, have established their plant here. They will manufacture tooth paste and other periodontist preparations, and later will add toilet preparations to their line. The officers are: Dr. A. G. Coleman, president and treasurer; K. C. Jopling, vice-president and general manager, and W. L. Henry, manufacturing chemist.

The James & Graham Wagon Co. will immediately erect a strictly modern wagon manufacturing plant, 150x260 feet, one story, concrete and steel. In the near future they will also erect boiler-rooms and drykils, the total outlay of all improvements being about \$100,000. Their old plant recently suffered from a fire. The new one will be up to date in every way and enable them to push ahead rapidly.

Hugh Mooney is organizing what is known as the Southern Film Co., for the purpose of making moving pictures, including one and two reel comedies, educational, industrial and news pictures.

Mr. Fenton reports a total of 134 new industries to December 1.

Bogalusa Begins Home Construction Work.

Bogalusa, La., December 8—[Special.]—The Great Southern Lumber Co. has closed a contract with the Hancock Construction Co. of Chicago to construct 25 bungalows in Bogalusa in order to meet the demand of the growing population of the city for more houses. The bungalows will be of the California type, with all modern conveniences.

The Great Southern Company has adopted a home-building plan, whereby bungalow cottages are sold for 5 per cent cash and 98 monthly payments without interest. The company has also adopted a plan to build a new home for everyone sold. Under this system every newcomer to Bogalusa will be able to buy a home on long terms of payment.

Squeezing the Water Out of Payrolls.

Bogalusa, La., December 8—[Special.]—Surprising results followed the action of the Great Southern Lumber Co. in adopting a retrenchment policy in its Bogalusa plant in order to meet the depressed conditions in the lumber market.

The company adopted a "weeding-out" process and dropped about 300 men from its payrolls. This had an electrical effect on the employees who still held their jobs. They not only became more efficient, but did more and better work.

Instead of being decreased, the output of the plant was actually increased 50,000 feet of lumber per day, while the cost of production was lowered between \$10 and \$12 per thousand feet.

\$1,000,000 Bond Issue for Jacksonville Docks.

Jacksonville, Fla., December 13—[Special.]—For the purpose of extending the present facilities at the municipal docks to meet the great increase of export business now flowing through the port of Jacksonville, city authorities are planning a bond issue of \$1,000,000, the election for which will be held in January.

Although the municipal docks, built five years ago at an expense of some \$2,000,000, were planned to take care of the port's foreign business for a period of at least 20 years, judging from the city's growth at that time, the development of Jacksonville as an ocean gateway has been so great within the past two years that vessels are forced to remain in midstream for some time awaiting berth; also the large warehouses, 1000x120 feet, are overflowing with freight and the open piers are forced to turn away business or let it remain on cars because of lack of space.

The growth of this city as a port may be shown by the comparison of business flowing over its wharves in 1915 and in 1920. In 1920 the total export business of the port was approximately \$1,200,000, while for 1920 the grand total of over \$20,000,000 will be reached, and this could be increased if dock facilities were provided.

This bond issue planned will be used to build an additional open pier 1000 feet long and 120 feet wide and a covered pier of the same dimensions, and will also provide modern handling facilities, such as electric trucks, cranes, etc., in addition to those recently installed.

There are 32 steamers plying between Jacksonville and foreign ports in regular trade at the present time, in addition to the large number of foreign steamers and sailing vessels carrying cargo, and during the month of November 178 ships of various kinds entered and cleared, not counting the large number of coastwise vessels.

Jacksonville has also become a great coal-exporting port through the erection of modern tipples here by Jewett, Biggins & Brooks, mine operators of Cincinnati, O., and the W. L. Barr Export Co. and the Pan-American Shipping & Forwarding Co. It is estimated that over 600,000 tons of coal will be exported through this gateway this year.

Preliminary Survey on 22,000-Acre Drainage Project.

Montgomery, Ala., December 8—[Special.]—Guy A. Hart, former Government engineer, has gone to Fayette and Lamar counties to make a preliminary survey of the proposed Fayette-Lamar drainage project, which is proposed to drain approximately 22,000 acres in the two counties. This makes a total of 10 districts in the State on which surveys have actually started, comprising some 85,000 acres. These projects are as follows: Fayette-Lamar Drainage District, Fayette and Lamar counties, 22,300 acres; Big Swamp Drainage District, Lowndes county, 25,000 acres; Sauter Creek Drainage District, Jackson county, 6000 acres; two small districts in Jackson county, totaling 2500 acres; Fowl River Drainage District, Mobile county, 3500 acres; Hay Sap Drainage District, Bibb county, 6000 acres; Winfield Drainage District, Marion county, 6000 acres; Bogue and Watson Creek drainage districts, Marion county, 6000 acres, respectively.

In addition, districts comprising a total of more than 150,000 acres are under contemplation.

To assist in promoting this work in Alabama, which so far has been done under the aid and supervision of J. M. Moore of the State pure food, feed and drugs department, the United States Drainage Bureau has assigned an expert drainage engineer to Alabama, who will report for work after December 15.

Refinery Will Be Enlarged to Manufacture By-Products.

Lawton, Okla., December 9—[Special.]—That the Damascus Manufacturing Co. of Cleveland, O., contemplates enlarging its Lawton refinery with equipment for manufacturing several by-products of crude oil was the announcement made to the Chamber of Commerce recently by W. G. Black, president of the company. Its local refinery is only a skimming plant. He said that the enlarged plant would bring \$300,000 a month into Lawton. Mr. Black said he contemplated moving to Lawton and building here his permanent home.

Building Activity in North Carolina Towns.

Raleigh, N. C., December 10—[Special.]—There is good general building activity throughout the State at present, including the erection of school and college buildings, residences and manufacturing plants. At Franklinton a new public school will be built as soon as a site is secured, \$100,000 having been given by S. C. Vann of that place for its construction. Improvements are being added to the Stonewall Jackson Training School for delinquent boys at Concord. One of the most striking buildings of the group is a granite church built upon a rock cliff.

At Greensboro an additional tract of 10 acres of land between the present ground and the Southern Railway lines has been purchased by the State College for Women. A large alumnae building is to be erected shortly. An idea of the need for additional facilities may be gained when it is found that this term nearly 500 women were turned away from the college for lack of room.

At High Point a nine-story building of reinforced concrete is nearing completion, and will be used for display of furniture made there. This town leads the country in the manufacture of furniture, with the exception of Grand Rapids, Mich.

Mayworth, between Belmont and Gastonia, has many new and beautiful buildings.

The number of automobiles seen in the section is amazing. The progress made in construction of good roads in Durham, Orange, Alamance, Guilford and other counties has been specially good, and traffic is increasing at great rate.

Enlarging Their Facilities for Business.

Opening new offices and enlarging the capacity of the home plant is the way the Concrete Steel Bridge Co. of Clarksburg, W. Va., is meeting the present situation and preparing for the greater business expansion which broad-visioned business men of the country deem certain of realization in the near future. In a letter to the MANUFACTURERS RECORD Mr. Frank D. McEnteer, president and general manager writes:

"We are glad to advise that we have opened the following district offices: One at Huntington, W. Va., in charge of J. G. Dobie as district manager; another at 19 Deaderick Building, Knoxville, Tenn., in charge of T. W. Horner, district manager. Arrangements have been practically perfected for a sales representation in Jackson, Miss., and an additional branch office is contemplated for the near future at Birmingham, Ala. Our home office at Clarksburg has been enlarged and a new department established with A. R. Montgomery, Jr., in charge to handle the design and construction of permanent structures for bituminous coal mines. Our practice is confined entirely to the design and construction of reinforced concrete in the following three specialties: Bridges, industrial buildings and bituminous mining plants.

"FRANK D. MCENTEER,
"President."

Important Additions to Tin Lithographing Plant.

Wheeling, W. Va., December 9—[Special.]—The sum of \$150,000 is to be expended by the Wheeling Steel Corporation in the construction of an addition to its Yorkville plant, which will be used for the purpose of lithographing tin. This addition will make it possible to finish the products of the Wheeling Can Co. and the Yorkville plant, both units of the Wheeling Steel Corporation. Brick and concrete will be used largely in the construction of the building, which will be fireproof, and which will be ready for operation about April 1. Lithographed tin boxes, tobacco boxes, lard cans, etc., will constitute the product of the plant.

Gum Roller Plant for North Carolina Town.

A plant for the manufacture of gum rollers for use in mining operations will be erected at Beard, N. C., about eight miles north of Fayetteville, by the National Roller Co., 2634 South Hobson street, Philadelphia, Pa. According to the Fayetteville Chamber of Commerce, the manager of the plant is J. Roy Anderson. Gum wood is to be used exclusively.

Reports from Textile Districts Show Increasing Trend Toward Optimism.

Atlanta, Ga., December 11—[Special].—A survey of textile conditions in several centers of the South indicates that the worst of depression has passed and that an upward trend has set in. Mill presidents are more optimistic than they have been in weeks. They do not look for any sudden boom, but do anticipate gradually improving conditions.

The five cotton mills in Greenwood county, South Carolina, after having been operated on a curtailed basis, are again running on full time, according to the survey, and with one exception are working night and day shifts. J. C. Self, president of the Greenwood Cotton Mills; J. P. Abney, president of the Grendel Mills; Senator S. S. McGhee, president of Panola Mills, are united in the belief that the present tide will lead directly to normal conditions. The latter predicts that in 30 days the wheels of the mills in the South won't be able to turn fast enough to meet orders.

The textile situation in Spartanburg is brighter now than it has been with reference to both the operation of mills and the sales end of production. Among the nearly 900,000 spindles in the county not one is idle. Mill men are reporting better sales of cloth, and the gloom which seemed to have settled for an indefinite stay is apparently lifted.

Carolina Cotton Mills Reflect Improved Conditions.

Laurinburg, N. C., December 13—[Special].—The Scotland Mills, the Waverly Mill, the Prince Mill and the Dickson Mill, cotton manufacturing establishments of this place, which have been operating on half time for a number of weeks, are now running on full time. There has been a renewal of orders from the trade, and the mill owners are hopeful now that the worst of the depression is over and that they will be able to operate at full capacity in the future.

At Asheville no cut in production or reduction of wages is contemplated. Superintendent Murphy says that the mill is now operating just as it has been in recent months, and that it has not followed the lead of other manufacturing concerns in curtailing production. Labor has been little affected by the general disturbance in industry. None of Asheville's industries has been closed, and the prevailing note is one of confidence in the future.

Announcement is made that the Hamilton Carhartt Mill No. 1, York, S. C., resumed operation today and would operate every other week until further notice. The mill has been closed since October 7.

Keep Your Eye on the Greatness of the Nation.

Optimism is radiated from an appeal to the trade issued by Charles F. Stone, manager of sales of the Atlantic Steel Co., Atlanta, Ga., as follows:

"Conditions at the present time, even though they are disquieting and distressing, do not justify the extreme spirit of pessimism that seems to pervade some sections of our country.

"This old world keeps on turning over regularly and daylight follows darkness, and who knows but that the beclouded present may soon become the sunshiny tomorrow that all are hoping for and some believe is only a short way ahead.

"All of which indirectly suggests that the man who goes ahead with an abiding faith in the future is the one who progresses, and it is the one that stops who soon falls behind the procession, for the world about is going on.

"You say, 'What's the use?' Well, naturally, we prefer bustling good times, but a red-blooded American never has backed away from an uphill pull just because it looked steep, and never will.

"Throw off your pessimism! Look for the bright side of things! You can't help yourself by grumbling or worrying, and besides you'll sleep better. Ever try it?

"The United States is so rich in money and natural resources that it is the envy of every nation in the world. Superlatives fail to visualize its greatness, and yet we hesitate!

"Let's go!"

BUILDING UP A SWEET-POTATO INDUSTRY SOUTH.

Suggestions As to Handling and Marketing Product on an Extensive Scale.

Planters Products Co.

Montezuma, Ga., December 8.

Editor Manufacturers Record:

I have read with a great deal of interest the article by Dr. H. E. Horton, agricultural commissioner, American Steel & Wire Co., on the sweet-potato industry in the South, which article appeared in your issue of December 2.

In view of the fact that our company has storage capacity for over 100 cars of sweet potatoes, and has bought, cured and stored this season 25,000 bushels of sweet potatoes, besides storing for farmers in our six curing and storage-houses in this section, it might be of interest to your readers to have our viewpoint in reference to the establishing of the sweet-potato business as an industry in the South.

As to the curing of sweet potatoes in modern curing-houses, this, as those who have been close to the progress of the last few years know, is an accomplished fact and an unqualified success. As Dr. Horton states, however, it is not the only thing necessary to the solution of the problem. It is but one step in marketing the sweet potato, although it is the most important step made in the sweet-potato industry to date. For it is axiomatic that unless the sweet potato can be preserved for a reasonably lengthy season it is impossible to make an industry with it.

The building of enough sweet-potato houses to cure and store the crop of the South will require a great deal of capital, besides expert knowledge and business ability.

The losses due to decay are very great. It has been estimated that over half of the South's crop is lost each year. Although disease is what causes this decay, improper storage methods permit the ravages of disease. This does not mean that the modern sweet-potato house will keep a potato that is already infected with disease, but rather that the old storage in earthen banks was and still is very conducive to the development and spread of any disease spores present. The sweet potato is a tender vegetable. If it is frosted, it will not stand up. A few crates of frosted potatoes that we unsuspectingly bought this fall have already decayed, although from outward appearances they were free from disease at the time of purchasing. The earthen bank not only fails to protect from frost and great variations in temperature, but also there is always some moisture given off by sweet potatoes, which moisture must be driven off or spore germination will take place. So the curing-house is the solution of the problem of preserving the crop.

The question of what to do with the strings and jumbos is not so easily disposed of. It is our belief that whenever transportation charges, package costs and marketing must be paid on a low-priced product as the sweet potato, then only the best grade or grades should be sent to the markets, other than those that are merely local.

From 10 per cent to 50 per cent of the farmers' sweet potatoes in this section has been made up of strings and jumbos this season. One possibility that appears promising is that by seed selection, careful studying of the nature of the soil to be planted, and the proper use of fertilizers, it will be possible to increase the proportion of No. 1 sweet potatoes. Still there will be left many culls. At the present time these are used for hog and cattle feed. The use of culls (that is, strings and jumbos) for canning, sweet-potato flour, syrup, dried feed, alcohol, vinegar and dehydrated for human consumption has not yet reached a practical stage. These uses indicate future possibilities. Their possibilities are appealing to the natural-born builders of industries, but not to the conservative investor of capital.

At the present time, from this viewpoint, the job of the sweet-potato grower is to grow, cure and store sweet potatoes of No. 1 grade. The rest of the crop will be fed to hogs and cattle or used locally for human consumption.

Since this is being done, the question of marketing comes next. There is no doubt that there has been so much misinformation about marketing farm crops that it is very difficult to get sound information. Dr. Horton in his excellent article fails to outline a practical procedure from the field or storage-

house to the consumer. In his letter to you he states: "As I write this letter I have before me a Macon (Ga.) dispatch, saying 'sweet potatoes sold today on the streets of Macon for 50 cents a bushel.'" Then he asks: "Has an unusually large crop brought about this condition?" The inference being that the efforts made during the past few years to get the Southern sweet potato into the markets of the North and West have been incorrectly carried out and are ready for the discard heap. I doubt that Dr. Horton had this thought in mind, but we are having so much of "Do away with the old methods of business and try my quick cure for all pains" that it is well to be careful. Macon is in the heart of an immense area of land as well adapted to sweet potatoes as any section. During the digging season there is nothing to prevent farmers from glutting the market. They have no storage expense, no transportation expense, no middleman's cost and profit in selling down the market at the time that they are digging their crop, and it is perfectly natural and maybe desirable for them to sell it down to the bottom. I live here in the greatest peach section of the United States, and each year the peach market of this section is sold down to the bottom, as far as the local demand is concerned. The fact is it has nothing to do with the wholesale marketing of peaches from this section. What is the reason why people living in a section producing some crop for the rest of the country should not have all of that crop that they want for a small price, especially when there are immense quantities of culls and overripes that cannot go?

But what are the steps to be taken to get the sweet potato from the curing-house to the markets of the country, and even into the Macon market, after the green potatoes have disappeared?

First—Have a No. 1 product. This has been discussed.

Second—Advertisement. In selling to people who have not used it before, they should be told how to prepare the Southern sweet potato.

Third—Close connection between the producer and the broker or wholesaler. If the producer or the storage people are large enough to do this, this is all that is necessary. If the producer or storage people are not large enough, they should make connection with other producers and storage people or with some intermediate agency for doing this. I doubt the practicability of an association of growers, as they are too widely scattered. An association of storage people would probably help if this could be legally accomplished. Right now the best bet seems to be for the large storage people to make their connections with brokers and wholesale people and wherever feasible carry the smaller people with them. J. WILLIAM FIROR, Manager.

Car Supply Hinders West Virginia Coal Shipments.

Charleston, W. Va., December 11—[Special].—Notwithstanding the fact that there was little general demand for coal in Southern West Virginia last week, during the first half of the month of December the car supply has been so poor on the Chesapeake & Ohio Railway that coal operators have found it impossible to furnish coal in accordance with contracts. As customers in many instances cannot understand why they should not receive coal at a time when there is no general demand in the spot market, they are threatening to cancel such contracts, and in some instances have cancelled them.

Transportation conditions throughout West Virginia as a whole at the beginning of December were about as bad as they had been at any time during the year. It was the consensus of opinion that railroads were not securing equipment and cars enough to keep pace with greatly increasing normal requirements, let alone to make up for conditions existing at the time the railroads were returned to private ownership.

\$1,716,712 in Building Permits for Orlando.

Orlando, Fla., December 12—[Special].—Building permits for the past eleven months of 1920 issued here represent expenditures amounting to \$1,716,712, as compared with \$513,367 issued for the corresponding period of 1919. In view of the size of this city, the figures are attracting considerable attention, and show the big amount of building that is going on in the section.

Charlotte Cotton Manufacturers Optimistic.

Charlotte, N. C., December 9—[Special].—Charlotte cotton manufacturers are exhibiting a spirit of hopefulness just now which has been absent for some time past. The recent firmness of the cotton market has caused the textile interests to think perhaps the price has hit rock bottom, and this hope is reflected in their attitude toward the present situation. None will admit, however, that new conditions are such as to make increased operations advisable for mills in Mecklenburg county. It is impossible to confirm reports that some mills in this county now closed or operating on reduced schedules are preparing to increase activities.

A tremendous improvement is reported from Gaston county, which is reputed to have more textile plants within its confines than any other similar area in the world. A large number of Gaston mills have either resumed full or half-time operation after being closed.

S. B. Tanner, head of a large chain of mills, said last night that "anyone might consider the general situation very hopeful, though it is true we have no way yet of determining whether the tide has really turned. Quite a number of mills are reporting receipt of a few more orders, some of them substantial. This fact offers some reason to believe there will be a gradual renewal of demand for textiles. The general situation, however, continues to be such as to impel the mill owners to exercise the greatest caution in their actions."

Mr. Tanner concluded his statement with the observation that "a further tightening of the holding movement will do much to bring about an early return of stable business conditions."

Galveston Leads Combined Ports in Cotton Receipts.

Galveston, Tex., December 13—[Special].—At the close of business at this port on December 10 the total receipts of cotton for the 1920 season exceeded the combined receipts of all other ports of the country, according to the statistics of the local cotton exchange. Total receipts at Galveston for the present season are 1,411,221 bales, while the combined total of receipts of all other ports is 1,409,591 bales. The total receipts at all ports for the present season are shown as 2,820,812.

New Orleans is shown as running second to Galveston, with 577,745 bales, and Savannah third, with 319,846. Houston has attained a high place, with 219,882 bales. Last year Savannah ranked second place and New Orleans third, but New Orleans has increased her receipts over last season, while Savannah shows a decrease. Galveston shows an increase over the same period last season of nearly 500,000 bales.

Tulsa Building Permits for Month \$510,340.

Tulsa, Okla., December 11—[Special].—Building permits issued in this city during November represented total expenditures of \$510,340, according to the monthly report of the building inspector. With the exception of \$89,000 for a public garage, the entire amount was for residences, alterations and private garages.

Local builders and contractors look for an unabated continuation of present building activities, but do not anticipate that the full stride will be reached until spring.

Texas to Sell 500,000 Acres of Public Lands.

Austin, Tex., December 11—[Special].—It is announced by J. T. Robison, State Land Commissioner, that a sale of 500,000 acres of public lands will take place on January 3. These lands will be sold to the highest bidder, and the purchasers are not required to live upon the lands. One purchaser may buy eight sections of 640 acres each or less. The purchaser must pay down to the State one-fortieth of the price. The remainder of the principal may be paid in 39 annual instalments, with interest at 5 per cent. Bids on the land are to be made in sealed envelopes. The State Land Commissioner has fixed a minimum price per acre for each tract. The minimum price for most of the land is \$2 an acre. Practically all of this land is situated in West Texas.

Constructive Legislation Features the Efforts of Leaders in Washington

[Special Correspondence Manufacturers Record.]

Washington, D. C., December 13.

The short visit of Senator Harding to Washington resulted in an agreement among the leaders of Congress to utilize the time of the short session to begin hearings on the important constructive bills which the new Congress will be summoned in extraordinary session to consider. Senator Harding pointed out that the temper and exigency of the country were such that no time should be wasted, and that, in view of conditions, it would be most unwise to twirl thumbs pending the inauguration of the new Administration.

The fundamental problems confronting the nation are taxation, the tariff and foreign trade. The last of these, embracing the subject of exchange, is probably the most important, though not so regarded by the public generally. It is impossible to construct tariff laws which will protect American industry if the exchange differentials are such as to place a bonus in every country of the world on exports to America and impose a corresponding penalty on all imports from America. Moreover, international trade, unless conducted on terms of barter, is so hampered under existing exchange conditions that there exists in effect an economic barrier that is almost impenetrable. It is no secret, therefore, that one of the first tasks to which the new Administration and the Congress will direct themselves is the solution of the exchange problem. There is a rumor about that England will suggest to President Harding that he summon a world economic conference, to meet in Washington, for the establishment of some machinery devised to facilitate the movement of international trade.

Formal hearings on the tariff will begin January 6. A schedule of hearings for particular industries has been arranged, but individuals desiring to be heard should communicate with the clerk of the Ways and Means Committee, House Office Building, Washington, in order to secure a place on the calendar. It is expected that the hearings can be completed and printed, so that when the new Congress assembles there will be available a complete record of hearings as well as all statistical data to enable the Ways and Means Committee to begin the formulation of its bill. Tariff legislation is so complicated that, even with the utmost speed, months are required before a final enactment can be got. Some optimists are predicting that the new measure can be made law by July, but the best opinion is that it will be next fall before the bill gets to the President for his signature.

Hearings on the revenue bill are now being held. They are chiefly preliminary in character and designed to get control of the official Treasury statistics and views. The time for these hearings is very short, as they will have to be discontinued to make way for the tariff hearings, but they will later develop into the most important of all the hearings. Sentiment is now turning toward a straight tax on corporation profits, without any exceptions or modifications. The rate of this suggested tax has not been made public, but it may be stated that 15 per cent is about what the leaders have in mind.

The capital has been filled with representatives of various agricultural interests who have presented facts that are in many respects appalling. It was brought out that sheep were bringing net at the Kansas City market \$1.22½, although they had been produced at a cost of from \$7 to \$12 a head. Testimony was given tending to show that the average mortgage on sheep in America is \$9 a head. A situation equally unfortunate in regard to cattle was disclosed. The testimony showed that it was not a question of the advisability of doing something; it has become a matter of necessity.

The first move of the joint House and Senate Agricultural committees was the introduction of a joint resolution directing the Secretary of the Treasury to revive the War Finance Corporation. The resolution also contained a section directing the Federal Reserve Bank, so far as consistent with sound banking, to permit member banks to grant liberal extension of credit to

farmers at as low a rediscount rate as possible. This second section met with some opposition, on the ground that it was not wise to criticize the Federal Reserve Board, by implication or otherwise, but no real objection to the revival of the War Finance Corporation appeared. Some Senators doubted if it would be able to accomplish much, but did not wish to oppose it. One, for instance, said: "What's the use trying to revive it when the same old antagonistic element which Secretary Houston leads will have charge of its administration? They will want it to fail, not succeed."

It was brought out in the debate that British business interests had taken up with the Lloyd George Government the question of more liberal Government aid for export credits, and that a decision had been reached to the effect that "a pound of sterling spent abroad in creating conditions to rehabilitate exchange of goods and to restore the economic balance of nations will be worth 10 pounds of sterling spent in the United Kingdom." It was argued that the same reasoning applied to American export trade, and that the functioning of the War Finance Corporation, therefore, was not only essential at this time for the well-being of America, but also to revive confidence in Europe.

There is a general agreement among wool experts that the industry cannot be saved by any remedial legislation except an absolute embargo on imports. This country has been made a world dumping ground. During the week a representative of New Zealand was in Washington offering 40,000,000 pounds of mutton at some ridiculously low price, for delivery c. i. f. at either Atlantic or Pacific ports. An absolute embargo pending passage of a protective tariff act might save the situation, which is becoming acute because of the fact, as one man put it, that it is cheaper to feed sheep to hogs than to buy tankage. But the leaders have very little idea that they can get Congress to vote for an embargo.

There is evident, however, a leaning in sentiment toward the suggestion made by the MANUFACTURERS RECORD, namely, the passage of a joint resolution empowering the President, through the War Trade Board or some other agency, to license or embargo any imports where the domestic industry is threatened with ruin. Certainly it is recognized that the German campaign against American dyes is sure to have disastrous effects if the American industry is left even for a few months without protection.

Hearings before the Ways and Means Committee disclosed that even such protection as is afforded by the present tariff law has been absolutely nullified by exchange differentials. Some months ago the President issued an executive order requiring that the actual exchange ratio be used in computing tariff duties, and not normal exchange. When the present law was enacted all important countries were on a gold basis. Now only the United States and Japan are on a gold basis; the rest are "publishing money." The plan proposed to correct the situation is in two parts, as follows:

- (1) The present regulations by which duties are assessed on the basis of the foreign purchase values in depreciated currencies should be rescinded, and all duties provided in the present tariff schedule should be collected on the basis of the foreign cost of normal rates of exchange, or, if the foreign invoice is in United States money, the difference between the current rate of exchange of the country of origin at the time of purchase and the normal rate of exchange should be added to the invoice and the duty collected on the total. In this way there would be restored the amount of duties intended to be collected under the present tariff law.

- (2) In order to protect the present alarming possibilities for dumping huge quantities of raw and manufactured products from countries with depressed currencies, it is proposed that in the case of all foreign purchases, whether dutiable or not, the Federal Government shall collect in the form of an equalizing

charge on all imports, in addition to any duties provided by the tariff law, the difference between the amount paid the foreign seller figured at the current rates of exchange and the same amount figured at the normal rate of exchange. The equalizing charge thus provided for might be limited to, say, 30 per cent of the foreign value of the merchandise at par of exchange.

The necessity for remedial legislation of this sort at once is recognized, and some definite action may be got.

A powerful labor lobby has been operating in favor of prohibition of immigration for a period. The demand for legislation of that sort, however, is not confined to the labor groups, but is endorsed very generally.

The financial paragraphs in the President's message were written by Secretary Houston, it is understood, on which account no great importance is attached to them. They are simply a resume of what Secretary Houston has been saying ever since the campaign to break the markets was begun. The President himself it is said, has not been strong enough to study the financial situation carefully, and has been compelled to rely on the advice of his official financial adviser.

Very little pessimism is noted in Washington among the business men who came here in spite of the very difficult condition in which many of them find themselves. There seems to be a general attitude of hopefulness, based on the conviction that existing conditions are entirely artificial and will be corrected by either this or the incoming Congress. There is plenty of evidence to show that the world needs everything the United States has to sell, and that the problem is not one of finding markets so much as of extending proper commercial credits. The export banks being organized under the Edge law and the revival of the War Finance Corporation should, it is felt, go a long way toward reviving prices and confidence. Few believe that commodity prices can remain at present low levels for a long period, since it is figured out that taxes and increased wages to railroad employes and miners must always hereafter be figured in cost of production—and no philosopher has yet appeared in support of theory that farmers will continue indefinitely to produce crops at a loss for humanitarian reasons.

The Wonderful Growth of Gaston County in Textile Development and Wealth.

Gastonia, N. C., December 10.—[Special.]—The star county of all the South as a cotton-milling center is Gaston, next west of Mecklenburg and in the heart of what is known as the "White Coal Country," getting power from the streams which rush down from the Blue Ridge. The story of Gaston county is like a dream which has come true.

The first mill was built in 1848, at Mountain Island, on the Catawba River, and was in use until utterly annihilated by the greatest flood on record, July 16, 1916. It had 10,000 spindles, and made seine twine and thread, the power coming directly from the river. Two years later the second mill was built, at Gaitherville, on the south fork of the Catawba, and was popularly known as the "Pinhook," because of the bend of the stream, like a bent pin. It made yarns and was operated by water.

Today there are 96 mills, and all except 12 use "white" coal; a dozen water, or the "black" variety. There is yet a great deal of undeveloped water-power, which creates the white coal, and at Mountain Island an important survey is now in progress, presumably by the Southern Power Co., for new dams as power sources. Some mills are driven by water direct; for example, Spencer Mountain, High Shoals and McAden, the Spencer Mountain plant lighting Gastonia. Some mills which had intended to use white coal changed to the black sort when there appeared impending trouble to get more power by electricity.

The total spindleage of the 96 mills is 1,066,696, all of this being only actual producing spindles, mule-twisters not being counted. There are 20,000 employes in the mills, out of a total population of 51,422 in the county. Gastonia has 14,000 population. Its mill capital is \$12,000,000; that of the mills outside \$26,000,000. The county 20 years ago had 27,903 population, and 10 years ago 30,063.

There has never been a general strike, but only a few sporadic ones, in the mills. All the labor comes from the vicinity and the

nearby mountain counties, and not one-half of 1 per cent is from elsewhere. The county is simply checkered with mills, each with its village, church and school. In some mills there is the profit-sharing plan. Thus in the Mutual Mill, built by C. B. Armstrong, 49 per cent of the stock was set apart for the employes, and they took it all. The community mill work is highly developed. The woman's club of Gastonia began it by putting in a public health nurse, and the mills contributed. The idea spread quickly, and now all the mills have such nurses and also special community workers. The schools are built jointly by the mills, the county and the town. The building and loan association has played a great part in the development. Wealthy men as well as the employes take stock in the association.

Fifteen mills are now under construction—five in Gastonia, four at Belmont, two each at Cherryville and Bessemer City and one each at Dallas and Mt. Holly. The value of mill products last year was \$45,000,000. Combed yarns are the chief product, and half the mills in this branch of manufacture in the United States are in Gaston county. Over 45 mills make these finest of yarns, chiefly at Gastonia and Belmont. These yarns compete with silk in the making of various fabrics.

The largest mill, the Loray, is in Gastonia, was built in 1900 by local capital and made sheetings for the China trade. It was built before hydro-electric power came into use to any extent, and is steam-operated. It was bought some years ago by the Jenks interests of Rhode Island, and now makes special yarns for automobile tires. It has 90,000 spindles and 2000 employes. The new owners removed nearly all the old looms. Those that were left weave tire fabric. Other mills in the county and town make carded yarns, blue denims, damask linen, sheeting and hosiery, but no print goods.

The story of the growth of Gaston county in a financial way is wonderful. In 1900 the taxable valuation was \$4,476,149; in 1910, \$11,517,201; in 1919, \$33,573,489; in 1920, under the true valuation rule by the terms of the constitutional amendment ratified this November, \$82,681,329. The great jump in population and in the value of property will attract attention anywhere in the country. Local work and local folks have brought this about, for there has been no immigration from other States or other countries.

The town of Gastonia is one of the best paved in the State, and is widely known. Its newest feature is the State orthopedic hospital, soon to be occupied and a gift of the town to the people of North Carolina. The State will maintain it, and will enlarge it when necessary. Gastonia pays the highest salaries to school teachers in the State—from \$133 to \$250—and has a special tax for its schools of 35 cents on the \$100 valuation of property.

Tobacco Growers Urge Revival of War Finance Board

Norfolk, Va., December 11.—[Special.]—At a recent meeting of the Tobacco Growers' Association of North Carolina held at Raleigh plans for strengthening the tobacco market were discussed, with the result that the following telegram was dispatched to all North Carolina representatives in Congress:

"Tobacco farmers, like cotton growers, are facing the most disastrous situation in their history. We urge financial relief through the following measures and means:

"First—Revival of the War Finance Board.

"Second—Re-establishment of foreign trade and credit.

"Third—Making available alien property funds for loans to farmers.

"Fourth—Using profits of the Federal Reserve Board.

"Fifth—Deferring payments of income and excess profits taxes."

This telegram was signed by J. Y. Joyer, J. Bryan Grimes, E. G. Moses, D. W. Kilgore and Clarence Poe, who took occasion also to say that "the Congress, Treasury and Federal Reserve Board must find a way or make one to save the farmers from financial ruin."

Nearly all tobacco warehouses in Virginia and North Carolina are now closed until January 1, and there is much discussion of the feasibility of keeping them closed a month more, or even longer.

Testimony in Washington Shows Complete Impotence of Secretary Houston and the Devastating Effect of His Policies on American Trade

[Eugene Meyer, Jr., a native of California, was graduated from Yale in 1896. Thereafter he studied international finance and banking in Europe. In 1901 he became head of the firm of Eugene Meyer, Jr., & Co. of New York and served as director of a number of important corporations until his resignation in 1917 to enter the war service of the Government. He served with the War Industries Board and the Council of National Defense. In 1918 he was appointed by President Wilson to be a member of the War Finance Corporation, and became managing director in March, 1919, after Congress had empowered the War Finance Corporation to extend its activities to assist in financing exports. The views of Mr. Meyer on international trade command high respect in business and financial circles. Senator Thomas of Colorado, although personally opposed to the revival of the War Finance Corporation, said he would support the reviving resolution "because I have the very highest opinion of the ability and business efficiency of Mr. Meyer." The following article comprises a statement made by Mr. Meyer before the joint session of the House and Senate Agricultural Committees, December 6. It is so complete an exposure of the impotence of Secretary Houston and the devastating effect his policies have had on American trade that every good American should read it.—Editor Manufacturers Record.]

By EUGENE MEYER, JR.

The Secretary's testimony, to a great extent, was a repetition of previous statements in explanation and defense of his policies, as expressed first in a letter dated September 29, 1920, and published in full in the Commercial and Financial Chronicle of New York on October 9, and again in a lengthy address to the American Bankers' Association at Washington on October 20, 1920. The only addition to his previous statements was his reference to the general advice on curtailing crops that he gave to the farmers of the country in the spring of 1919, when he was Secretary of Agriculture. This advice, he intimates, would have been very much to their benefit had they followed it, but it appears they did not. One is apt to infer that Secretary of the Treasury Houston contemplates the plight of the producers of the country with somewhat greater equanimity on account of their failure to follow the admonitions of Secretary of Agriculture Houston. The Secretary's testimony constitutes a confession of complete impotence in the present great crisis.

In support of his policy of inaction he continues to make statements, which, were one inclined to characterize them in an unfriendly way, might be called misleading, but in view of the high office he holds I prefer to describe them as inexact. I refer specifically to:

(1) His statement, continuously repeated during the past six months, that the War Finance Corporation was a war organization created for a war emergency. This, in spite of the fact that the powers to make advances to finance American exports were granted to the corporation by Congress as a Reconstruction Amendment on March 3, 1919, four months after the armistice. These powers were to continue, according to the law, "until the expiration of one year after the termination of the war between the United States and the German Government, as fixed by proclamation of the President." This much-to-be-desired event has not yet taken place.

(2) His repeated efforts to stigmatize the movement for the resumption of the War Finance Corporation as an attempt to restore inflated prices, when he must be aware, by this time, that the real question which is agitating the producers of the country is the problem of the orderly marketing of our products.

(3) The use of misleading statistics, such as the statement that the exports of cotton for the year before the war were between \$600,000,000 and \$700,000,000 and for the year 1919 amounted to \$1,137,000,000, the point here being taken that the exports, in bales, for the year 1913 were about 33 per cent in excess of the exports for the year 1919.

(4) The statement that the war powers of the corporation expired with the armistice. This, in spite of the fact that when the railroad appropriation failed in March, 1919, the War Finance Corporation loaned to the railroads over \$100,000,000 under its war powers during April, May and June, 1919, more than six months after the armistice, and that it has practically the same war powers as those under which the President appointed a Fuel Administrator by authority of the Lever Act in November, 1919.

(5) His statement that 50 per cent of the export finance loans which the corporation actually made were made for the export of manufactured goods, and only 50 per cent of the export of agricultural products, whereas at the time the War Finance

Corporation (activity) was suspended its tentative applications from responsible parties involved the export of agricultural products to the extent of 300 per cent of the loans previously made on agricultural products.

(6) His statement that in time of peace the Treasury should not be in the banking business. This, in spite of the fact that the purpose of the amendment, in accordance with the identical words of the law, is "to promote commerce with foreign nations through the extension of credits."

(7) The statement that the Government could not compete with private bankers. This, in spite of the fact that an overwhelming proportion of the bankers of the country desire the aid and co-operation of the War Finance Corporation in the present crisis.

(8) The holding out of great hope in connection with one export financing corporation now being formed under the Edge law with \$6,000,000 paid-in capital, and another whose formation is to be discussed on December 10 in Chicago. This, in spite of the fact that the leaders in both of these institutions are strongly desirous of the co-operation of the War Finance Corporation, and in the case of the Southern Cotton Export Corporation the head has expressed himself as doubtful if it would be able to do very much at an early date to relieve the situation without the co-operation of the War Finance Corporation.

(9) The statement that the progress in connection with the formation of export financing corporations has probably been retarded by talk of Treasury help. This, in spite of the fact that a leading banker of New Orleans, interested in the new Cotton Export Corporation, stated that the formation of the Edge law export corporation had been delayed by the cessation of the activity of the War Finance Corporation, and in spite of the fact that organization of several Edge law corporations was abandoned after the suspension of the War Finance Corporation's activities.

(10) The statement that the War Finance Corporation would have to accept all sorts of loans, whether or not material to the public interest and the needs of the present situation. This, in spite of the fact that the War Finance Corporation asserted and practiced the right to exercise its own judgment with respect to any and all loans, considering them from the point of view of public policy in a broad way. For example, the Corporation refused to finance exports to South America and to China last spring on the ground that while we were shipping gold to these countries it would not be in accordance with public policy to give credits for exports.

(11) The statement that the War Finance Corporation had no funds except what it would borrow. This, in spite of the fact that the Corporation has \$375,000,000 on deposit with the Secretary of the Treasury.

This point is mentioned here as an example of inaccurate statement and not because I believe it would be a wise policy to use the money on deposit with the Secretary of the Treasury. For, on the contrary, I have recommended the financing of the needs of the Corporation, in case of resumption, by issuance of its own bonds.

(12) The statement that the Treasury should not be asked to take security which business would not take. This, in spite of the fact that the War Finance Corporation could make loans

only to American business that had already taken such security in connection with exports.

(13) Finally, his statement about the difficulties of doing business with the Central Empires while a state of war existed. On this point he substantially repeated a statement made in a letter dated September 29, 1920, referred to above, in which a lengthy explanation of his policy concludes with the following sentence: "Matters are further complicated for this nation by reason of the fact that it has not yet concluded peace with its enemies, and has not yet joined with the other great nations of the world in a co-operative effort to hasten the return of sound conditions and to allay the fears of the world as to the recurrence of other wars."

This, perhaps, is as important a point as any, for all the rest of his statement is negative in import, but in this explanation of the economic difficulties, published during the campaign, there is a directly implied method of remedy. One cannot avoid the conclusion that the Secretary is pointing out to the farmers, as well as to the merchants and bankers of America, not only that this analysis of the situation indicates its solution, but that perhaps it is the only solution. One is loath to believe that the weapon of economic pressure, which is a feature of the League of Nations of the Versailles Treaty, should be applied by an officer of the Government against the people of his own country to force them to accept his views on international relations, but in view of these words, how is such a conclusion to be avoided?

I cannot believe that the staunchest adherent of the League of Nations will sanction this method of advancing its progress.

For the benefit of the committee, may I be permitted to review briefly a few essential points in connection with the suspension of the War Finance Corporation and its possible resumption?

At the time of the suspension of the business of the Corporation opposition was expressed by a substantial part of the board of directors and by prominent business men and prominent bankers interested in financing exports from various sections of the country, without regard to geography or politics. Some of the leading members of the Democratic party opposed the Secretary's action, as well as members of the Republican party. His decision was taken on his own interpretation of the intent of the Congress at a time when the Congress was in session, and the matter could have been submitted to the Ways and Means Committee on Finance for their views. This I asked him to do, but in vain. On the question of policy, apart from the intent of the Congress, I suggested calling a conference of the representative business men and bankers, including the economic representatives of the United States Government at the Peace Conference to consider the question in an advisory way, but this suggestion was rejected.

When the Congress passed the Reconstruction Amendment to the War Finance Corporations Act it did so, I believe, with a view to the possibilities of unbalanced conditions due to the rapid changes in our domestic and foreign markets, to the difference in the war-time needs and peace-time needs, and also to the post-war breakdown in the purchasing power of many of those countries previously accustomed to purchase from our people. It is impossible to conceive that the Congress acted with an idea attached to a date so much as with an idea attached to a condition. The Congress did so, perhaps, with some regard to the idea which I expressed in my testimony, as follows:

"It (the amendment to the War Finance Corporation Act in connection with foreign trade) is not designed to displace private enterprise or to put the Government permanently into general banking business. The amendment is limited as to time and as to purpose. It is intended, primarily, to help our own industry, our own labor, our own finance and thus own our national well-being. Nevertheless, a prompt restoration of international trade will do much more; it will enable Europe to restore its industry and employment of labor, and thus hasten its political and social peace. Unemployment and hunger are the surest sources of social disorder.

"In extending credits at this time to foreign countries to enable our industries and theirs to resume normal activity promptly I believe we would be making a most important contribution toward international peace and prosperity, and that the results arising would benefit alike the country extending the credits and the countries which receive them."

At this moment our trade is upset and demoralized as it per-

haps has not been in our history. Millions of people in Europe are suffering from a lack of material things the inability to sell which is causing distress to millions of people in our own country.

I wish to make it clear that I do not believe the resumption on the part of the War Finance Corporation will cure all the woes of the world, but I do believe that its resumption will be one important step in remedying the congested state in the business of our agricultural production, in our industrial production, in our commercial processes and in our banking system, for let it be well understood that the policy of price-smashing has, by confession of the Secretary himself, produced no liquidation of loans, and Governor Harding testified before the committee that our banking system would be helped by a more orderly marketing of our production.

I called attention to the fact that at the time of the suspension of the War Finance Corporation, Edge law corporations were about to be formed on a considerable scale, and Governor Harding stated that he doubted it, because there had been so little action taken along these lines previous to the suspension. From an examination of the facts it appears that the Edge law was passed on December 24, 1919, and the regulations under which Edge law corporations could be formed were not published until March 23, 1920. The suspension of the War Finance Corporation allowed the bankers of the country only six weeks. More than two-thirds of the entire time between the passage of the Edge law and the suspension of the Corporation was consumed in formulating the regulations under which the Edge law corporations were to operate if they were organized.

If the War Finance Corporation resumes at this time, I believe a considerable number of Edge law corporations will be formed, and that their value to the present situation would be increased and accelerated by the co-operation of the War Finance Corporation. On this point I quote my testimony before the Senate Committee on Finance, as follows:

"This bill is designed to meet this unprecedented condition of the world's international trade, and should stimulate our bankers and our merchants to the greater courage and the prompter action that is necessary to meet the emergency."

In connection with the discussion of this problem, may I add that at this moment our finance and trade is more than a matter of business—more than a matter of finance? And, above all things, it is certainly more than a matter of the outworn political economy of the laissez-faire school, of which the Secretary appears to be an adherent. Let us not forget that the stakes involve the welfare and happiness of millions of people on both sides of the water. In the great crisis of the war we suspended the normal rules for action under normal conditions in favor of exceptional rules of conduct in affairs made necessary by the prosecution of the war. We all share the desire to have things return to normal, but I am not one of those, nor do I believe that you are, gentlemen of the committee, who think that by merely acting as though things were normal they will become normal. In order to restore normal conditions in the soundest and promptest way it is chiefly necessary to have a clear vision of the abnormal conditions and to keep the mind sufficiently flexible to meet them.

Civilization does not consist in letting nature have her way; on the contrary, all that we value in civilized life has been achieved through the control and intelligent direction of natural laws in accordance with the needs of humanity. The Secretary of the Treasury considers that we should bow our heads to the inevitable. His disposition to bow to the inevitable, in my opinion, involves too ready an acceptance of conditions that can be, if not entirely cured, nevertheless considerably alleviated in the general interest.

If the Congress authorizes the resumption of the War Finance Corporation, it should not stop with that action. It should, if I may suggest, proceed promptly to a consideration of the broad question of the economic condition of the country internally and internationally. But this will take time, and I would respectfully recommend that for the present the resumption of the War Finance Corporation be determined with all possible haste. Not only will the funds available be helpful, but as an expression of attitude on the part of the Congress, as an evidence of its appreciation of the dire necessities of the country, it will be the most comforting, the most helpful and the most healing event of the year.

South Offers Tremendous Field For Varied Industrial Development

CHEMICAL ENGINEERS OF AMERICA SEE GREAT OPPORTUNITIES FOR CHEMICAL AND OTHER INDUSTRIES IN SOUTH, WHERE WEALTH OF RAW MATERIALS ABOUND—SIGNIFICANCE OF MEETING HELD IN NEW ORLEANS.

By COURTENAY DE KALB.

New Orleans, December 10.

The American Institute of Chemical Engineers has just finished its thirteenth annual meeting, held in the city of New Orleans, a gathering full of significance for the development of Southern industry. It is interesting to note that on the same day, and without collusion, Dr. David Wesson of the Southern Cotton Oil Co. as president of the American Institute of Chemical Engineers and Mr. W. B. Thompson at the Memphis Cotton Convention made the same criticism of the tendency of Southern farmers to raise but one crop. Dr. Wesson was speaking with reference to the rice growers of Louisiana, while Mr. Thompson was flaying the cotton planters. It had been shown to Dr. Wesson how the rice growers had suffered this year by the sudden slump in the rice market. The present price is only 3 cents per pound at the railroad shipping point, which is less than the cost of production. The rice growers are begging for tariff protection against the product of coolie labor in China. While admitting that there was justification for the demand that protection be accorded them, Dr. Wesson said that the duty of every farmer was to raise at least a sufficient variety of products to ensure his subsistence apart from the money-producing crop. A single crop necessarily falls into the hands of centralized forces on its way to market, because the grower of big single crops is under the necessity of calling on financiers for cash to meet obligations incurred in planting and harvesting as well as for moving to market. Consequently, the market price is closely controlled by these same financial interests. The remedy is to be independent of any need to realize immediately, and this can best be accomplished by a diversity of crops that will render the farmer self-sustaining aside from his major crop.

This idea was one of the salient features of the meeting, and was closely linked to its logical corollary, which was that the South should produce more crops that could locally be manufactured into high-grade, high-value, non-perishable forms. The rapid development of rice-board manufacturers was one example. Two such paper mills, utilizing rice-straw, are being erected at New Iberia, the center of Louisiana rice culture. One of these, which is nearly ready for operation, is the United Fiber & Products Co., under the able direction of Albert C. Bernard, which will produce 45 tons of straw-board daily from 60 tons of rice straw. Mr. Henry L. Brack of Baltimore, Md., is president of this company. The Charles Bolt Co., the other concern, is also erecting works at New Iberia. These mills will use the soda process, and they are accumulating stocks of baled rice-straw, for which they are paying \$7.50 per ton f. o. b. cars at shipping points.

It was also pointed out that the production of figs, which grow luxuriantly in Louisiana, should become the basis of canning industries far beyond the small development of that business today. The country is also particularly adapted to the culture of yams, returns of 500 to 1000 bushels per acre being regularly obtainable, and this should serve as the basis for large starch factories.

The Chemical Engineers visited the famous old Avery salt mine at Avery's Island, near New Iberia, as well as the works of the Union Sulphur Co. at Lake Charles, La.

Following the keynote of local manufacture, sounded by Dr. Wesson, a lively discussion was aroused by Dr. John C. Olsen, secretary of the American Institute of Chemical Engineers and professor of chemical engineering in the Polytechnic Institute of Brooklyn, N. Y. In an effort to arouse the non-technical portion of the audience to an appreciation of the opportunities presented he made a graphic picture of the economic error involved in

shipping salt from Avery's Island to the North and selling it for a few dollars per ton when it might be converted on the spot into caustic soda, worth \$80 per ton, and into liquid chlorine, worth \$100 per ton. The producer of this salt, which is unrivalled for purity by any other source of salt in the world, since the Louisiana product averages 99.8 per cent pure NaCl, is to that extent wasting his output. The man who takes and refines his raw product by putting power and labor into it is making the large profit, while the miner receives a pittance.

This suggestion was attractive and striking enough to awaken keen interest. It resolves itself into the question of economically producing and distributing the output of a great alkali factory in Louisiana. It has been often debated and seriously considered by established manufacturers of alkalies. That they took no steps toward its realization indicates that some one or more of the factors in the problem seemed adverse. However, it has been many years since such investigations have been conducted, and some conditions have changed in the meantime. How rapidly things change is illustrated by the fact that some one suggested that the chlorine contemplated by Dr. Olsen as a product from Louisiana salt might be shipped West to be used in the extraction of gold. The fact is that chlorine has been completely superseded by sodium cyanide as a solvent for gold, but other new uses for chlorine have developed.

On the other hand, whereas Louisiana 20 years ago was on the outer edge of a region with a relatively small population and a proportionately small consumption of alkalies, with no demand in Latin-America that possessed any commercial importance, today the development of the cotton-oil products has become enormous, and makes a large market in the South for these chemicals; likewise, the petroleum development in the last two decades has moved steadily toward the Gulf, and the growth of oil production will apparently exceed the records of the past along the Gulf Coast in the next 10 years. Also Mexican oil is being refined in large quantities in Louisiana, and other Southern refineries are being erected. Soda is needed at all of these in large amounts for neutralizing the last traces of sulphuric acid in the final wash of the oil. Here are two large uses that did not exist to any appreciable extent 20 years ago.

Meanwhile, the population of the South has greatly increased, owing to the steady development of industry, creating a proportionate market for alkalies, and the industrial growth in South America, according to no less an authority than Henry Howard of the Graselli Chemical Works, Cleveland, O., has resulted in a large demand for caustic soda and soda ash. It would appear, therefore, that Dr. Olsen was right in declaring that Louisiana should consider a more economic utilization of her salt resources. These are unparalleled as to size and purity.

At Avery's Island the mine is worked through a shaft 540 feet deep. There is only one level in the mine, which is, in effect, a great chamber 60 feet high from floor to roof, arched from the walls to a double row of massive pillars. The chamber is about 800 feet long, and can be continued for a great distance before reaching the sides of the "salt-dome." Many times as much salt as has been removed since the beginning of development can be mined from this same level. When that level is exhausted the work can be continued at level after level to a depth of 2000 feet, as shown by borings, and, as the drill stopped in salt, there is no telling how much deeper the deposit may extend. At Jefferson Island, a few miles west-northwest from the Avery salt mine, a well was drilled many years ago by the famous Joe Jefferson, who owned this tract, and salt that was nearly chemically pure was found at a depth of 14 feet, which persisted for 2300 feet, at which point drilling was stopped.

These are only isolated examples of the great salt deposits of

Louisiana. It is thought by Dr. Robert Glenk, director of the State Museum at New Orleans, that the salt deposits extend under a large part of the State, and have merely been pushed near to the surface in the process of forming the peculiar domes that are so interesting a geological phenomenon over the coastal plain of Louisiana and Texas. Salt is found in great masses beneath the gypsum that underlies the sulphur deposit of the Union Sulphur Co. near Lake Charles, La. It underlies the great outcrop of scattered cretaceous limestone in Winn parish, Louisiana. The resources of salt in Louisiana are beyond calculation.

For the manufacture of salt by the ammonia process pure limestone is needed, and that is available in Winn parish, the stone analyzing 98.5 per cent calcium carbonate. The third requisite—ammonia—is available in conjunction with a fuel resource in Louisiana that has been little appreciated. This is a remarkable bed of lignite that covers nearly the whole western part of the State. It is an Eocene lignite, occurring in what is called the Wilcox formation. The bed is nowhere less than four feet thick, and at some locations it measures 14 feet. It lies at an average depth of 19 feet below the surface, so that the overburden could be removed by steam shovels, and the coal extracted in the same way, the strippings being subsequently leveled so as to become available for fruit culture, following examples in other parts of the world where this system has been adopted. The composition of this lignite is approximately:

	Per cent.
Moisture	30
Volatile hydrocarbons	30-35
Fixed carbon	35
Sulphur	0.5-1
Ash	3-5

The remarkably low ash content will excite immediate interest. The moisture content is no objection when the fuel is converted into producer gas, which is the logical way for utilizing it. The ammonia would then be scrubbed out and become available for use in a soda works, while the gas could be employed directly in explosion engines or used as a source of heat. The lignite and the salt lie close together, and the limestone can be brought from the Red River, just south of the deposit, by barges. Having at hand a source of cheap power, caustic soda could be produced electrolytically if desired without consideration of the soda ash. The suggestion thrown out by Dr. Olsen should bear fruit.

The foregoing illustrates the trend of thought of the members of the American Institute of Chemical Engineers on confronting the resources of Louisiana and realizing the opportunities that they present.

Features of Interest on Institute Program.

The session of the Institute meeting opened at the Cabildo in New Orleans on December 6 with an address of welcome by Dr. Charles S. Williamson, Jr., head of the School of Chemical Engineering at Tulane University, who pointed out a reason for special interest in Louisiana and the South on the part of chemical engineers because of its varied resources, which supply industrial plants all the way to the Canadian border, and because there is abundant power inviting the manufacturer to establish works in the South, and finally because these favored Southern States can cheaply feed the factory workers.

The usual routine business was then conducted. The question of the property rights of authors in papers presented to the Institute was discussed, and Dr. Olsen explained that when a paper was read in public it legally became public property, but the right of publication of the manuscript clearly belonged to the Institute. The next question was that of endorsing the super-power project for the North Atlantic seaboard. As the result of the discussion it was decided to appoint a committee to draw up a resolution. The names of those on this committee will be announced later by the president, Dr. David Wesson. The Jones-Revis bill was endorsed, as also was the project to create a Department of Public Works. An invitation to the International Engineering meeting at Gothenburg in 1923 was accepted. This is of interest as an instance of the activity of the Germans in endeavoring to assume a leading position in regard to chemical and engineering progress. The conflict through which they have just passed has not diminished their aggressive spirit.

The report of the Chemical Catalog Committee showed that in

five years the number of firms represented had grown from 132 to 725, and the copies distributed in 1920 have been 11,500. This catalog has proved an economy to all branches of the profession. The advantage offered by this publication consists in the very perfect classification of the goods produced, with a simple statement of their character.

The Longworth bill for the protection of the dye industry was endorsed by a unanimous vote. Action was also taken on the Nolan bill, which provides for increased pay to Patent Office employees. It was conceded that this was necessary, as the best men are leaving the service. The objection, however, was emphatic to Section 9, which, introduced as a rider, would give to employees in research departments of various bureaus the right to participate in the returns from inventions they may make while engaged in Government research through a licensing system under control of the President. This was characterized as vicious, an attempt at socialization, and it was condemned by unanimous vote. Resolutions to that effect were passed and transmitted to Congress.

The metric system was discussed, but no action was taken. It was the sense of the meeting that there was no likelihood of the obligatory use of that system being made law. Maximilian Toch jocosely said that by the time any group of Congressmen was educated to appreciate the merits of the metric system, that group was retired to private life, so there was no danger. On the other hand, he said that the immense investment in patterns and drawings would make it impossible to obtain support for any measure of that kind. As chairman of the committee on this question, Mr. Toch will prepare a report which will be published later in the proceedings of the American Institute of Chemical Engineers.

No decision has been reached as to the place for the next annual meeting. The sentiment is favorable for the selection of some city in the South. The question will be determined at the summer meeting at Detroit.

The program of papers read at the New Orleans meeting was peculiarly rich in subjects of vital moment. The paramount issue of the hour is that of labor, and the problem as stated by Dr. Charles L. Reese, chemical director of the high explosives operating department of the E. I. du Pont de Nemours Powder Co., was that of genuine co-operation with the employees, not through philanthropic welfare work, but through opportunities afforded the workman to enrich himself within the sphere of his activities—that is, in connection with the work in which he is engaged as employee. The paper is too important and elaborate to be properly presented in a brief abstract, and will be treated in a separate article.

The system proposed by the Dupont Company naturally contemplates long-continued service by the employee. Mr. Hugh K. Moore, chief chemist of the Brown Company, Berlin, N. H., objected that change in the working force was not altogether undesirable, and that unless changes did occur, especially in the technical personnel of a company, dry rot was sure to creep in. This led to a consideration of the desirability of change in research men, Dr. A. C. Langmuir of Brooklyn having asked as to the effect of the German system where each research chemist was obliged to guard his work from all others and report to the head of his department only. To this Dr. Reese replied that the most fruitful results were obtained by free interchange of ideas among all the men engaged in a plant. No man, he declared, can handle research and management at the same time, and such limitation on the research chemist meant that he obtained a minimum of valuable counsel and suggestion because the departmental heads were too absorbed in administrative problems to fully grasp the details of experiments in progress. Accordingly, there was no development of the younger men. While freedom of discussion among the technical staff regarding their work might result in leakage of information, it was true that exchange of ideas and knowledge between all those engaged in industry was one of the happy circumstances that led to our national progress. As long as his men did not carry their information to the Germans, he did not worry over leakage.

A paper of enormous practical value was "The Conservation of Heat Losses as Applied to Power and Heating Systems," by E. R. Weidlein, assistant director of the Mellon Institute of

Pittsburgh. He called attention, first, to the fact that the heat loss from 1000 square feet of exposed surface at 100 pounds steam pressure was equivalent to 300 tons of coal per annum. Higher boiler pressures imply higher steam pressures, and these call for a consideration of the whole question of insulation. The proper insulation is that at which there is a balance between the cost and the saving effected. The requirements of a good insulator are (1) low heat conductivity, (2) low specific heat, (3) low specific gravity so as to avoid excessive weight, (4) mechanical strength to withstand knocks and vibration, (5) ability to withstand the action of water and acids, (6) freedom from tendency to crack on alternate heating and cooling, (7) resistance to disintegration at the temperature to which it is exposed, (8) freedom from a tendency to corrode the surface to which it is applied, (9) non-inflammability. The advantage of air as a non-conductor is secured in porous materials. It depends upon the air being entrapped in pockets, the size of which is too small to admit of convection currents. Experiments were conducted on "85 per cent magnesia" covering. This consists of 85 per cent of basic carbonate of magnesia, the formula of which is $4\text{MgCO}_3 \cdot \text{Mg}(\text{OH})_2 \cdot 5\text{H}_2\text{O}$. The remaining per cent is asbestos fiber, added to give strength and durability. The basic magnesium carbonate is prepared from Pennsylvania dolomite containing 43 per cent of magnesium carbonate. The shapes are molded and dried for six days; then planed to dimension. The Mellon Institute tests were made on such insulating material furnished by the Philip Carey Company of Cincinnati, O.; the Ehret Magnesia Manufacturing Co., Valley Forge, Pa.; the Franklin Manufacturing Co., Franklin, Pa., and the Keasbey & Mattison Company of Ambler, Pa. These firms represent an aggregate invested capital of \$16,500,000, which indicates the magnitude of the industry. It is generally assumed that the heat loss from any uninsulated surface is 3 B. T. U. per square foot per hour per degree Fahrenheit of temperature difference between the heated surface and the surrounding air. This proves not to be correct. It may vary 50 per cent below that and go to values far above it. At 500 degrees of temperature difference the constant will increase to double the figure given for the smallest pipe. A temperature of 500 degrees is not uncommon, and some plants use steam at temperatures as high as 1100 degrees F. Curves were shown that facilitate calculating the economies obtainable by proper insulation under varying conditions. These curves will be of great practical value to steam users. The costs and the economies from the amount of covering used were calculated on the basis that one pound of coal will evaporate seven pounds of water from and at 212 degrees F., and that each pound of steam contains 1000 B. T. U. above the feed-water temperature. It was shown that in every case the use of the economic thickness of magnesia covering will repay the cost in less than one year. Trials on two boilers, 80 and 60 horse-power, respectively, showed a saving on the two of 1700 pounds of coal per day, which was 15 per cent of the total coal burned, or 310 tons per annum.

Henry Howard asked if only magnesia covering was recommended, and Mr. Weidlein explained that many others were equally good, but he was able to report only the result of tests so far made at the Mellon Institute. Mr. Howard then asked if he had tested hair felt. Mr. Weidlein answered that magnesia was specially suitable for high temperatures and hair felt for low temperatures in refrigeration. Mr. Howard suggested that mixed coverings were often advantageous. He had seen steam pipes in the open covered first with magnesia and then surrounded by hair felt that held snow for days without melting. Mr. Moore reminded the meeting that an increased thickness of magnesia covering on very small pipes may increase the heat losses, due to increase of the surface.

James R. Withrow, professor of chemistry in the Ohio State University, and F. C. Vilbrandt presented a paper on "The Sulfuric Acid Fume Problem," in which the question of fume abatement, absorption and diffusion was discussed, and it was urged that uniform legislation should be sought. The tendency everywhere has been to abuse the opportunity to mulct the factories, which in many cases had been the cause of developing the communities that protested against the so-called nuisance. This is in line with the "smoke-farming," which is a favorite form of graft from which the Western smelters suffer. It was

suggested that a committee on fume and atmosphere pollution be appointed to collect exact data and afford intelligent aid and guidance with regard to proposed legislation on this matter in the several States. A committee will be announced by Dr. Weston at an early date. Mr. Henry Howard said that all the difficulties had been adequately met in the British Alkali Act.

One of the most clean-cut expositions of the complicated problem of technical accounting that has yet been given to the public was presented by A. G. Peterkin of the Barrett Company in the form of a paper entitled "Costs—A Short Study of Factory Economics." When this is made available in the Proceedings of the American Institute of Chemical Engineers it will be a boon to thousands of factory accountants throughout the country. Such skilful analysis is possible only under the rare condition of finding technical training and a knowledge of expert accounting combined in a single individual, as in the case of Mr. Peterkin.

Mr. Maximilian Toch, in a paper on "Lubrication of Concrete," revived the discussion of the effect of adding too much water to concrete. He cited examples of seemingly mysterious failures of concrete structures where investigation revealed that the material and workmanship had been in conformity with approved practice among engineers. The difficulty had been the addition of an excess of water in the mixers. Mr. Toch affirmed that a mixture of half Portland cement and half sand, but with an excess of water, will not be as strong as a mixture of 10 per cent cement and 90 per cent sand to which the correct amount of water is added. Mr. Toch did not so state, but engineers have long realized that the bad practice of overdilution has grown along with the great development of concrete structures through an effort on the part of contractors to economize time, and also through practical difficulties in pouring cement that is not very thin. A small quantity of water, which leaves the mix looking dry, on being incorporated by sufficiently prolonged mixing, becomes "lubricated," and eventually is quite thin. There is a time factor involved in this, for which provision must be made in the estimates. The result is to insure safety of the structure. Mr. Toch's paper on the subject will be printed.

Prof. E. Bartow of the Illinois State Water Survey Division, Urbana, Ill., read an interesting paper on "The Treatment of Sewage by Aeration in the Presence of Activated Sludge." This is one of the newest developments in sewage disposal, which originated during the war. Houston, Tex., has led the van in this country by installing the system, views of which were shown by Professor Bartow. A plant is also being installed at Milwaukee, Wis., and the city of Chicago is erecting an experimental plant at the suburb of Maywood with a view to building ultimately a plant to handle the sewage of the entire city. The successive aeration of the sludge as it is advanced by pumping from one large tank to another is to promote aero-microbial growth, which completely breaks down the structure of the organic matter contained, reducing it in the end to a colloidal mass which settles so as to admit of discharging the larger part of the water coming to the plant with the sewage in a limpid, slightly colored condition so free from obnoxious and dangerous substances that fish will live and thrive in this effluent. Consequently, it disposes completely of the difficulty of pollution of the streams into which it is discharged. The settled sludge is then filtered and dried, after which it is available for mixing into fertilizers. While such plants are being operated with success, there is room for great improvement in methods of filtration and drying. This is the reason why Chicago is going slowly and is working out the details in an experimental plant. The system requires a large amount of machinery, but the results surpass those of any other method of sewage disposal now in use.

Prof. James R. Withrow of the department of chemistry of Ohio State University, Columbus, O., told of the great work undertaken by the Federated American Engineering Societies, an outgrowth of the call made upon engineers for national aid during the war. The object is to maintain an organization of the technical men of the country for advice and guidance in working out broad policies and improvements for the national welfare.

Mr. C. Burrows Morey of the Larkin Company, Buffalo, N. Y., revealed some of the bureaucratic inefficiency during the war and

the graft practiced by unscrupulous manufacturers in a matter so important as the preparation of "Sag Paste" for relieving soldiers burned by gases. Even common fellow-feeling for the heroes at the front failed to touch the heartstrings of these manufacturers, who prepared the most outrageous mixtures, with cheap and inappropriate oils, and even so loaded with inert matter that the paste could not be squeezed from the tubes. Enormous quantities of these goods were sold at auction later, and Mr. Morey's paper described the methods employed in salvaging the ingredients of these mixtures and their sheet-tin containers.

Mr. Walter L. Badger of the University of Michigan, Ann Arbor, Mich., gave the results of elaborate tests with horizontal tube evaporators made by the Swenson Evaporator Co., Chicago, Ill. The efficiency is very great, and superheat was found in the steam after having passed through the tubes.

The case for sugar was defended by Mr. Lezin A. Becnel of New Orleans in a paper, "Operating Variations in Sugar Production as Indicated by Some Plantation Data." He analyzed the economics of sugar production with the aid of an elaborate and ingenious series of charts and curves. He showed that a common error of sugar producers is to make too great a quantity of crystallized sugar. He insists on the need of flexibility in the plant, so that the producer, watching the market, may take advantage of conditions and make a proper balance of molasses and various grades of sugar so as not to be caught by an adverse market for the crystallized sugars. Protection is important, and Louisiana must demand it, but the production of suitable materials to meet shifting market conditions is equally necessary.

Mr. M. L. Alexander, chief of the Conservation Commission of Louisiana, made a forceful and interesting presentation of the resources of Louisiana and the intelligent work being done to prevent ruthless waste of these natural resources. The great strides made, as a State policy, toward reforestation shows that Louisiana is in advance of most States of the Union in this practical protection of her sources of wealth. The Urania Forest is a model of scientific forestry. He showed that in Louisiana a depleted forest can be completely recouped in 30 to 40 years, after which proper methods of cutting make it a permanent supply of timber. Pulp wood can be grown here in 15 years. The great oyster beds are also under control to prevent exhaustion and to insure replanting. The great game-bird preserves were illustrated by lantern slides, showing a new departure in caring for wild life on a great scale. Millions of birds winter in safety on these bird reservations, thus insuring the continuance of the species.

The work of the commission in directing oil drilling so as to prevent drowning out the wells and rendering portions of the field unproductive met with cordial approval on the part of the chemical engineers, as did also the restrictions upon the wastage of natural gas by making carbon black, and not extracting the gasoline, which is present in the Louisiana gas to the extent of about 60 barrels per million cubic feet.

The visiting members of the Institute left for Chattanooga on December 9.

Receivership of Railway and Power Company.

Raleigh, N. C., December 10—[Special.]—The Cumberland Railway & Power Co., owning and operating the street railway in Fayetteville and electric-light systems at Lillington, Fuquay Springs, Bailey, Middlesex, Holly Springs and other small towns in this section of North Carolina, has been placed in a receivership, J. R. Baggett of Lillington being named as receiver by Judge W. A. Devin of the Superior Court. The receivership was requested by the Harnett Trust Co. in behalf of itself and other creditors, who, according to preliminary investigation, are interested to the extent of over \$500,000, including banks in Raleigh, Fayetteville, Norfolk and Lillington, as well as many individuals.

After a conference with directors of the company, Receiver Baggett announced that the company is solvent and will continue to operate the property. An audit has been ordered, and on December 16 application will be made to Judge Devin to make the receivership permanent.

The principal offices of the company are in Raleigh. The company also maintains offices in Fayetteville and Norfolk. The officers are: Allan Benny, Baltimore, president; N. A. Sinclair, Fayetteville, vice-president; W. J. Feilder, Norfolk, secretary-treasurer.

International Banking Co. Stock Oversubscribed.

Atlanta, Ga., December 10—[Special.]—The Federal International Banking Co., proposed in New Orleans in November, became an assured thing today, when its stock subscription books were closed with its proposed \$6,000,000 minimum capital stock oversubscribed. Georgia's quota of \$1,500,000 has been taken, and probably exceeded, for belated subscriptions, now in the mails, have not been counted.

With the announcement of the success of the promoters came a call for the meeting of the permanent organization committee of the institution on December 17 in New Orleans.

Under the scheme agreed upon at the initial conference in New Orleans November 6, when the minimum capital stock was fixed at \$6,000,000, it was decided to allot to each of the Southern States capital stock in the institution equal to 3 per cent of the capital and surplus of the banks and trust companies in the several States. Thus Georgia's quota was placed at \$1,500,000. No limitation, however, was placed on the amount in excess of this that a bank or trust company might subscribe.

Although no formal announcement has been made concerning the subscriptions of the various States, advices from the campaign committees indicate that the following actually have been received:

Alabama	\$550,000
Georgia	1,530,000
Louisiana	1,500,000
Mississippi	500,000
Tennessee	800,000
Texas	1,500,000
Total	\$6,350,000

The stock-subscription campaign was launched in Georgia at the Federal Reserve Bank early in November, following the return from the meeting in New Orleans of John K. Ottley and Robert F. Maddox. Governor B. M. Wellborn of the regional bank entertained the members of the Atlanta Clearing-house Association and many visiting bankers at a luncheon, and it was here that the prospectus of the Federal Banking Co. was outlined. Messrs. Maddox, Ottley, Mills B. Lane, Senator Hoke Smith and Governor Wellborn endorsed the export bank unqualifiedly.

At the meeting of the Georgia Bankers' Association, held in Macon almost immediately afterwards, on the call of its president, H. Warner Martin, the campaign in Georgia took definite shape, when a pledge of approximately \$1,000,000 was made from the floor of the convention.

For the purposes of the campaign the subdivision of the banking association were used, and a campaign committee chairman was chosen from each of the five groups of banks, as follows:

- Group 1—James P. Doolan, Savannah.
- Group 2—Rufus H. Brown, Atlanta.
- Group 3—Ely R. Callaway, Lagrange.
- Group 4—James S. Peters, Manchester.
- Group 5—C. E. Martin, Fort Valley.

Robert E. Harvey, appointed field agent for Georgia, has been in active charge of the State campaign.

The Federal International Banking Co. had its origin in Washington, D. C., during the recent meeting of the American Bankers' Association, when a number of prominent Southern bankers conferred informally on means of expediting the move of cotton and other Southern products. The conferences led to the meeting in New Orleans, when the present plan was organized under the provisions of the Edge Act.

Asks Repeal of Excess-Profits Tax.

Birmingham, Ala., December 13—[Special.]—The Southern Metal Trades Association, in semi-annual convention here, Wednesday, went on record for a repeal of the excess-profits tax provisions of the income tax and recommending as a substitute a sales or turn-over tax of 1 per cent. Copy of the resolutions will be sent to the Ways and Means Committee and to the members of Congress. The convention also went on record as desiring recognition in income tax law of depreciation of inventories. Endorsement was given the campaign for a greater Georgia technological school.

Cotton Acreage to Be Decreased One-Third

AS RESULT OF SHRINKAGE IN DEMAND AND CARRY-OVER OF 9,000,000 BALES, BANKERS, MERCHANTS, BUSINESS MEN AND PLANTERS UNITE IN MOVEMENT TO DRAS-
TICALLY CUT ACREAGE OF 1921.

[Special Correspondence Manufacturers Record.]

Memphis, Tenn., December 13.

A reduction by every Southern planter of his acreage in cotton to 33½ per cent of his total acreage under cultivation is the feature of the program adopted by the great cotton convention held in Memphis, December 7-8. It is estimated that this will result in a decrease of 50 per cent in next year's yield.

Compliance will be compelled through credit restrictions and by denial of credit to any planter, farmer, supply merchant or landowner who refuses to join in the movement.

This is the answer of more than a thousand of the most prominent Southern bankers, merchants, business men and planters in attendance at the convention from 12 cotton-growing States to the situation which has arisen by reason of the shrinkage in the demand for cotton and the enormous carry-over of approximately 9,000,000 bales. There were also delegates from Illinois, the District of Columbia, New York, Massachusetts and Liverpool, England.

The convention did not content itself with merely passing resolutions. A definite plan of organization was adopted which will reach into every voting or school district through county executive and State central committees. Authority was vested in the convention committee to act as a general executive committee pro tem. A fund of \$10,000 was created by subscriptions from the floor for the preliminary work of the executive committee.

A resolution was adopted calling for the enactment of a law by Congress for a special census to determine how much untenderable cotton is now in domestic stocks; another resolution requests landowners not to require fixed money or poundage of cotton for rentals; one favors a system of bonded warehouses and a system of co-operative marketing, and another approves and favors any and all safe and sound plans looking to the extension of long credits to foreign customers.

Governor John M. Parker of Louisiana was elected permanent chairman, and Thomas B. King of the staff of the Memphis Chamber of Commerce permanent secretary.

C. P. J. Mooney, editor of the Commercial Appeal, in nominating Governor Parker, took occasion to point out the fact that there is a present prospective carry-over of American cotton this year of 9,000,000 bales. And he said the convention must be organized and conducted to such purpose that its influence would become permanent. Its leadership should be in such strong hands and the program so ordered that the South will no longer be constantly shifting between prosperity and bankruptcy.

Governor Parker spoke on "The Importance of This Convention." He had just returned from a conference of Governors at Harrisburg, Pa., and it was there impressed upon him that problems which confront the farming and industrial interests are not local to the cotton South, but are nation-wide.

We must do what we can, he said, to start the wheels of commerce moving along safe, sane and reasonable lines. The speaker advocated credits abroad, through bank and Government guaranties, to enable impoverished Europe to take American exportable surpluses of raw materials and foodstuffs.

Very little time was lost in speech-making. In the words of Col. W. B. Thompson, it is "time for action, not for argument." The conference got down to business early.

It became evident from the start that the campaign which was launched by the cotton conference to eliminate the present burdensome over-supply in cotton is deriving its impetus from bankers and others who have been supplying the credits for cotton growing. In a real, definite and significant sense it was not a conference of cotton growers. In this it differs from any so-called acreage movement that has ever gone before, and therein lies its chief hope of success.

J. P. Norfleet, temporary chairman, in calling the convention to order, made the very significant statement that individuals who refuse to join in the movement to reduce acreage, or who, having

joined, are disposed to violate their pledges, must be handled through the banking interests. This thought appeared to run through the convention.

Colonel Thompson expressed the same thought when he said: "The crux of the situation lies with credit agencies. It must be a bankers' movement, supported by all the agencies that come in contact with it. The banker holds the power in the hollow of his hand to make this movement a success."

It was Gov. John M. Parker who said bankers and merchants "should be memorialized by you to refuse to extend one dollar of credit to the man who refuses to carry out your program to reduce cotton acreage."

Colonel Thompson warned that the South cannot sit down and wait for the War Finance Corporation or anything else. Every effort must be made to broaden the market for cotton. The speaker had grown tired of hearing of delegates going to Washington in every emergency to have the Government to come in and rescue cotton from its troubles.

It does not matter, he said, whether there is too much cotton, or too little demand for it. The result is the same. Cotton which an unwilling demand does not take must be held. The South must see to it that the burden is not increased. An adequate reduction in acreage must be made in spite of price, should it go up, and in spite of anything. This is not a farmers' movement, Colonel Thompson said, it is a movement which has behind it all the business interests of the South. Landowners must be corralled into the movement. The wholly uneconomic system of producing cotton must be abandoned. The merchant must advance credit on cotton only as a surplus crop, and nothing for any of the things the farmer can make or produce himself.

Dr. Bradford Knapp's address was an outstanding feature. "Get it out of your head that anything but the supply and the world's ability to buy can fix the price of cotton," Dr. Knapp told his hearers. Dr. Knapp said also that because of the fact that portions of the world had been unable to purchase cotton for a number of years, a vacuum was supposed to exist. Because a man had gone without food for a day was no reason why he would eat six meals the next. A woman would not buy six calico dresses just because for six years before she could not buy one.

Dr. Knapp would launch a tremendous educational campaign in behalf of safe and sane farming backed up by what is done at the convention. He deplored the fact that people of Arkansas, and perhaps the people of other States, are selling their cattle and hogs in order to hold cotton. There may not, he said, be enough cattle left within a short time to consume the ruffage. Cattle are selling on the hoof at 2 cents a pound and below — and meat from the same cattle at 35 cents and above.

The other day Dr. Knapp wanted a pair of boots. He had to pay for them the price of a 700-pound steer. The price of 50 hides would not have paid for those boots. A pair of overalls, made of cotton, cost \$5. Cotton was selling that day at 10 cents a pound.

In a talk on acreage reduction Mr. Gerald Fitzgerald briefly outlined plans rapidly maturing under his direction for handling export cotton.

E. T. Stuart, vice-president of the First National Bank of St. Louis, was the first speaker Wednesday. He set out in considerable detail his impressions gathered in a recent survey of the cotton situation, which took him not only over the cotton belt, but through financial and cotton textile centers. He quoted from a number of trade and financial authorities interviewed during his trip, not one of which offered hope for any immediate resumption of demand on an adequate scale, although some seemed to think that there might be a gradual return to better conditions after the turn of the year.

Mr. Stuart spoke of excess prices and excess profits as diseased companions of war. He denounced the one-crop system, of which

he said: "When a banker lends money to support a one-crop system he administers carboic acid and is accessory to the crime."

Notwithstanding many plain statements concerning conditions which now exist, Mr. Stuart was optimistic. There is a way out, he said, and he reminded his hearers that "while individuals sometimes fail, communities never fail."

With a fine humor, wit and wisdom, mixed in his inimitable way, Governor Brough of Arkansas delivered one of the strongest appeals of the convention. "Just as the South has met crises and rose from the poverty and ruin that followed war, and from the terrible days of reconstruction rule, so will the South shake off the one-crop system and become the self-reliant industrial empire that God in His providence intended it to do," he said.

Governor Brough expressed his unqualified endorsement of a 50 per cent reduction in acreage and of the Fitzgerald plan for exporting cotton. He endorsed the effort to revive the War Finance Corporation. The selling of livestock to hold cotton was deplored, and he besought his hearers not to be guilty of the folly and to use their efforts to prevent their neighbors from doing so. He made a plea for colleges of agriculture as the means through which a better South will finally be gained.

C. P. J. Mooney, editor of the Memphis Commercial-Appeal, urged the development of a strong organization with a strong central control capable of making effective the things decided upon by the convention to be done. He sounded the warning that it is folly to hypnotize ourselves with the idea that some way, somehow, things will right themselves. We will pull out of the present situation, but it must be faced fairly and squarely and absolutely as it is. He traced briefly the history of cotton growing and condemned the one-crop system as wholly uneconomic and fraught with danger, whether attempted in the wheat districts of the West or the cotton regions of the South. He made no attempt to gloss over nor to underestimate the gravity of the situation which now confronts the South. He begged the men of the South to see the danger and to face it.

John G. Lonsdale, president of the National Bank of Commerce of St. Louis, agreed with the idea that acreage must be cut. He admired the man who was ready to stand up and fight and to meet a situation with manly confidence. Knowing the situation as he did, if his bank were not already lending money in the South he would begin to put it out. He spoke also of the days of prosperity, which in many instances had been squandered, and of people who ride in mortgaged automobiles with borrowed gasoline, instead of treading the path of righteousness.

The committee on cotton reduction, of which Col. W. B. Thompson of New Orleans is chairman, was composed of farmers, bankers and merchants. They were unanimous in presenting their report: Alabama—W. W. Thompson, F. A. Bloodworth and D. S. Rosenthal; Arkansas—A. W. Nunn, C. S. Fitzpatrick and A. C. Little; Georgia—L. B. Jackson, J. A. Moss and M. Cartrens; Louisiana—T. E. Flourney, J. F. Finke, Eugene Cazedussus and J. C. Barry; Mississippi—J. W. McGrath, O. B. Bledsoe, J. T. Thomas and E. F. Noel; Missouri—O. D. Hall, T. J. Douglass and E. S. Godson; Oklahoma—E. A. Edmondson, J. C. Buchanan and R. J. Koch; North Carolina—L. S. Thomlinson, H. M. Victor and T. B. Parker; South Carolina—E. W. Dabbs; Tennessee—Leon Sternberger, Fred Collins and Lem Banks.

Bartow (Fla.) Company's House-Financing Plan.

Through the plan of the Bartow Home Building Co. of Bartow, Fla., 17 houses are already under construction, some of which have been completed and occupied. This company was organized recently with a capital of \$50,000 for the purpose of encouraging and assisting in a financial way the building of houses in the locality. The company lends 80 per cent of the value of the new home, of which 50 per cent is loaned on a first mortgage at 8 per cent for six years, interest payable semi-annually, and the remainder, 30 per cent, is loaned on the installment plan, payable 1 per cent of the value of the property each month, out of which payment is first taken the interest on the two notes, and the balance of the payment is applied on the second mortgage note. The company plans to sell the first mortgage notes to investors.

A State Sinking Fund Commission Plan Proposed for West Virginia.

Charleston, W. Va., December 11—[Special.]—West Virginia Legislature may be asked to pass a law creating a State Sinking Fund Commission. Such a plan is being discussed to save money in many counties.

In a number of county or district units where bond issues have been sold bearing, say, 5 per cent interest, the proceeds are deposited in banks awaiting improvement or construction of roads or schools, such funds drawing only about 3 per cent interest, the result being that there is a 2 per cent loss on every dollar so held, or a total loss of thousands. Under the plan proposed the money would be invested by a State sinking fund commission in district or municipal bonds drawing 5 per cent interest, just as is now done by the Board of Public Works with the compensation fund of the State.

Hundreds of thousands of dollars, it is said, have been saved the various subdivisions of the State by the West Virginia Board of Public Works, which has control over the investment of the compensation fund, in the purchase of county, district and municipal bonds, the counties not only saving money by being able to secure par for their bonds, but by making deferred sales, the bonds not all being taken by the Board of Public Works at once, but in lots, on which the counties in the meantime save the interest. In this manner most of the subdivisions of the State have been able to market their bonds at par. As there are between \$8,000,000 and \$9,000,000 in the invested compensation fund, and as the sums mentioned represent, in large part, investments in the bonds of counties, districts and municipalities, it will be readily apparent just how much has been saved to the divisions mentioned through being able to market their bonds at par.

Should a sinking fund commission be created, it is tentatively proposed to have the State tax commissioner, the Secretary of State and the State auditor serve on the commission.

Tariff Commission's Report.

The United States Tariff Commission, in its fourth annual report to Congress, covering the fiscal year 1919-1920, renews its recommendations concerning interim legislation, customs administrative laws, foreign trade zones, dumping and unfair competition in the United States, and reciprocity and commercial treaties. The scope of the Commission's work is outlined in a synopsis of subjects which have been given detailed study: Agricultural products, including vegetable oils and fats; dairy products, starches and starch materials, fish, oysters, and other shell fish; chemicals, such as the barium chemical and lithopone industries; crude botanical drugs, incandescent gas mantles, dyes and other coal-tar chemicals, including a study of the cost of production in the dye industry; metals and minerals, especially those affected by war conditions; sugar, molasses and their manufactures; the textile industries, including cotton, flax, hemp, jute and wool manufactures, silk and silk goods; the wool-growing industry; wood and wood manufactures; paper and books; earthenware, and glassware; and sundries.

Investigations conducted in Great Britain and Japan were concerned with the British wool manufacturing industry, the British metal and chemical industries, and general industrial conditions in Japan. Data concerning silk production and manufacture in France, Italy and Switzerland were secured by a special agent. The Commission has completed reports on the colonial tariff policies of France, Germany, Italy, Spain, Portugal, the Netherlands, Belgium, Great Britain, Japan and the United States. A unique volume about to be published by the Commission is a digest of the commercial treaties in force between all nations at the outbreak of the war in 1914, as well as of those that have been concluded since that date.

The Commission is conducting an investigation of preferential transportation rates by railroads, not only in the United States, but in foreign countries, and by ocean carriers. Effort is being made to determine the relation of such rates to the operation of the customs duties.

Here and There About the South

Recent reports from Panhandle, Tex., state that building activities have been greatly stimulated there by the organization of a building and loan association, a number of new residences having been built within the last few weeks and others under contract.

The resources of the trust companies of Texas have passed the \$100,000,000 mark for the first time, according to latest figures published, the total in round numbers reaching \$115,000,000, a gain of 19 per cent over the previous year.

From the coast country of Mississippi, as well as from Meridian, Tupelo, Fayette, Jackson and other points, come reports of oil activity, following what are said to be favorable reports on this general section from geologists of high repute.

Work has progressed on the construction of the great Wilson Dam at Muscle Shoals, Ala., to the point of pouring concrete in the second lift of the main body of the dam. During November 90,000 barrels of cement were received, in addition to huge quantities of crushed limestone, sand and gravel.

The helium production plant which is being installed by the Air Service of the War Department at Fort Worth, Tex., is expected to be in operation before January 1. It is a helium repurification plant and is intended also for other hydrogen production and purification problems.

There is under consideration at Tulsa, Okla., a plan to bring water for the city supply from Grand River, 37 miles away. The river rises in the foothills of the Ozarks, and the water is said to be practically pure, Muskogee drawing its supply from the same stream.

Out of a total of 85 companies incorporated in the State of West Virginia for the month of October, 45 were new coal companies, and most of these were formed for active development work. The new coal companies show a total capitalization of \$6,424,000.

The Oak Cliff High School of Dallas, Tex., and the Central Oak Cliff School of that city have organized savings institutions with student officers and management. The students become stockholders by the purchase of thrift stamps. The movement has caused a greatly-increased interest in savings accounts and in business methods generally.

The Montgomery Chamber of Commerce is planning an advertising campaign exploiting the agricultural resources of Montgomery county, which is in the heart of some of Alabama's best farmlands. In this campaign a contrast will be drawn between the high-priced corn lands of Indiana, Illinois and other central Western States and the rich, highly productive and low-priced lands of the South.

The fact that a carload of lettuce was shipped recently from the Sanford (Fla.) district to New York at a net profit of \$2445 to the grower is another illustration of what is being done and what should be done to a much greater extent in all parts of the South in the way of concentrating upon some particular vegetable or fruit crop. Well-directed efforts in this direction bring a liberal monetary reward to the producer.

The University of West Virginia, at Morgantown, has the distinction of being probably the only institution of higher learning in the United States which is directly over a coal mine in active operation. When the property upon which the university now stands was secured for its present purpose the coal rights were withheld, and a company was formed recently to secure the coal from these lands, and which are now very valuable.

At Savannah, Ga., portable schools have been placed in service due to the congestion in the other school buildings and the large influx of new students. The new buildings are said to be not unattractive in appearance and will care for 300 children.

West Virginia's Tax Commission Report.

Charleston, W. Va., December 13—[Special.]—According to the sixth biennial report of the State Tax Commissioner of West Virginia, the cost of government in West Virginia has increased to a per capita cost of \$5.01 for the fiscal year ending June 30, 1920, as compared with \$4.54 for 1919 and \$3.07 for 1918. There was, according to the report of the Tax Commissioner, a deficit in the State fund on June 30, 1920, of \$451,000. The estimated deficit on June 30, 1921, will exceed \$1,000,000. The deficit is the result of the failure of the State to collect a privilege tax on oil and gas for the two fiscal years growing out of litigation instituted by the oil and gas companies. In case the recent decision of the Supreme Court of West Virginia in the oil and gas cases is affirmed, taxes accrued during 1919 and 1920 will wipe out the deficit of \$1,000,000.

It is shown in the report of the Tax Commission that more than 41 per cent of all disbursements made by the State are for educational purposes. The next highest group in point of expenditures is that which includes State hospitals and State institutions, the percentage of expenditures for that group being 17.40 per cent. Disbursements from the State treasury during the present year will probably reach a total of \$4,954,152.22.

It is recommended by Tax Commissioner Hallanan that a surplus of sufficient size should be maintained in the Virginia debt fund to permit the State Board of Public Works to anticipate required purchase of Virginia debt bonds. However, owing to purchases made and bonds redeemed, it will not be necessary to levy during the next fiscal year a tax of more than 10 cents on the hundred dollars with which to redeem or purchase bonds.

The Tax Commissioner also recommends that the Legislature should make provision for an emergency provision, properly safeguarded, with which to meet emergencies not foreseen at the time appropriation bills are enacted.

Lancashire Cotton Trade on Short Time.

Manchester, England, December 3—[Special.]—A week ago the English Federation of Master Cotton Spinners' Associations decided to take a ballot of the members using American cotton on the question of curtailing production by 50 per cent. The result was announced today, when it was stated that the necessary percentage of votes in favor of the scheme had been obtained. It is understood that the owners of 82 per cent of the spindles voted for organized restriction of output, 7 per cent against, and no replies were received from 11 per cent. In a circular sent out tonight by the Masters' Federation it is stated that all spinners of American cotton must curtail production at once by stopping the mills on Monday, Tuesday and Saturday of each week and running eight hours only per day on Wednesday, Thursday and Friday each week until further notice. The curtailment of production recommended should be rigidly adhered to, as any equivalent or alternative system of short-time working is deprecated. In working the mills eight hours per day on Wednesday, Thursday and Friday it is suggested that the factories should run from 7.45 A. M. to 12.15 P. M. and from 1.15 P. M. to 4.45 P. M. Members who are spinners and manufacturers are required to stop their spinning plant 12 hours each week. In order to prevent any misapprehension, it should be distinctly understood that any short time previously worked cannot be counted against the 50 per cent stoppage now recommended. The decision arrived at today affects owners of 37,000,000 spindles in Lancashire, the bulk of which are in the Oldham district. The cut in production means that over 100,000 operatives will only work half time.

Engineers Name Water-Power and Conservation Committee.

The board of directors of the American Association of Engineers has appointed a committee on water-power and conservation, headed by Dr. F. H. Newell. The other members of the committee are Edmund T. Perkins, president of the Edmund T. Perkins Engineering Co. of Chicago; Charles E. Waddell, consulting engineer of Asheville, N. C.; L. F. Harza, hydro-electric engineer of Chicago; H. A. Allen, consulting engineer of Chicago, and J. B. Lippincott of Los Angeles.

Program of Action Proposed by Rivers and Harbors Congress

[Special Correspondence Manufacturers Record.]

Washington, D. C., December 13.

A large number of important engineers and transportation experts of the country spent three days in Washington last week calling the public attention to the crying need for a sane and definite national policy of waterway development. The occasion was the convention of the National Rivers and Harbors Congress, which was largely attended and very seriously considered by Congressional leaders, particularly those from the Mississippi Valley and the South.

The transportation muddle of the past summer was generally pointed to as glaring evidence of the need of means supplementary to the railroads for moving the nation's products. A definite attempt was made by the directors of the meeting to adhere to the organization slogan of "A Policy and Not a Project" by keeping purely sectional interests out of the discussions, so that even the controversy over the St. Lawrence project was confined to private talks and quiet distribution of literature in the hotel lobbies.

The spirit of the congress was spoken by James E. Smith, vice-president at large and director of the waterways division of the Mississippi association in his address entitled "Transportation: Our Nation's Greatest Problem." He suggested a change of the organization's program from a purely educational campaign to one of action, including a definite set of proposals to be placed before Congress. To quote him:

"Through the influence and effort of the Mississippi Valley Waterways Association a bill has been introduced in Congress known as the Newton Bill, and the massed strength of the Valley will be behind this bill in the present Congress. The Newton Bill provides specifically for the completion within three years of certain trunk-line waterway projects adopted by Congress in 1910, including the Ohio and portions of the Mississippi and Missouri rivers. The projects named were adopted in 1910 and appropriations were made to begin the work, with the expressed intention of completing them within a period of 10 years. Those 10 years have passed, and the work is only 35 to 50 per cent completed because of the shameful and neglectful methods having been pursued. The Newton Bill asks now only for the work to be done that was promised 10 years ago, which promise has not been redeemed. We propose now to have the work done, and our people will no longer endure the shameful neglect of their interests to which they have been subjected, nor will they longer permit the waste of their money which they have contributed to the Government revenues for the use and benefit of all the people.

"The people of the Mississippi Valley are also disgusted with the action taken by our last Congress in the passage of its Rivers and Harbors Bill, which was the most ridiculous, paltry, picaresque and inexcusable piece of legislation ever enacted by an American Congress. The Esch-Cummins Bill handed out to the railroads from the Federal Treasury over \$634,000,000—obtained from the taxes collected from our people—for the purpose of enabling the existing railroad system of the country to function to its full capacity. And in addition to this outright gift, the same law provided for an increase in both freight and passenger rates for the railroads, which places an indirect tax on the people of the United States that will amount to approximately \$1,700,000,000 per annum, and this heavy tax will amount to many billions more before these rates will be reduced; indeed, it is highly probable that a further advance in freight rates will be made in the near future.

"Please understand me, I am not criticising the help given to the railroads by the Esch-Cummins Bill. In my opinion, the Government acted wisely in their effort to preserve to its people the chief present means of transportation and distribution, but, mark you, the expenditure of these billions of dollars will merely enable the railroads to continue to perform the service which their present mileage and equipment can carry, but they will not add a single mile to our existing transportation facilities."

Mr. Smith's complete program includes:

"First—A demand upon the Congress for the adoption of a

definite, comprehensive plan for the permanent improvement of all of the navigable waterways of our country which have already been approved by the United States engineers, or which may be approved by them and added to the proposed projects for early completion, the work on all such projects to be carried on upon the plan of continuous work, to the end that they may be completed and put into use in the shortest time possible.

"Second—That the projects included in the general plan for improvement be taken up in the order of their importance, first attention to be given to the main rivers, which may be regarded as trunk-line channels of a general national system of water highways, and that the work on these main lines be pushed as rapidly as possible so as to secure their completion and use as soon as possible.

"Third—That as soon as the so-called 'trunk-line' channels are completed, the accumulated plant and equipment which will have been previously in use in the improvement of the larger channels be then put into service in carrying on the work upon the improvement of the branch-line 'feeders' of the main lines, which will include all rivers that traverse the productive areas of the country, and in which areas increased facilities for transportation and distribution are required to promptly and economically handle the products which the inhabitants of these areas produce or consume.

"Fourth—That in the prosecution of the proposed plan of creating and establishing a national waterway system of transportation the plan adopted should provide for the completion of the entire system within the period of 10 years, and earlier, if possible, to the end that the great problem of transportation, which is at present a menace to our future growth and development, may be satisfactorily and permanently solved.

"Fifth—That provision be made for the creation of a special waterways commission that will be separate and distinct from all other governmental departments—similar to the Panama Canal Commission—which shall have complete jurisdiction over all inland waterways, with full legal authority—

"To employ the necessary working force needed to carry on the proposed work;

"To enter into contracts for the work to be done;

"To determine the order in which the different projects shall be completed;

"And to have entire supervision over all operations connected with the undertaking until it has been entirely completed.

"Sixth—That an appropriation of \$1,000,000,000 be made by the present Congress for the purpose of carrying on the suggested plan, the amounts to be expended over a period of 10 years, to be furnished as needed, to pay for the work as it is completed."

At the conclusion of the convention the following officers were elected for the coming year: President, Hon. John H. Small, Washington, D. C.; secretary-treasurer, S. A. Thompson, Washington, D. C.; director for life, Capt. J. F. Ellison, Cincinnati, O.; director for life, Hon. Jos. S. Ransdell, Lake Providence, La.; sergeant-at-arms, Col. John I. Martin, St. Louis, Mo.

Placing on Federal Reserve Board the Blame that Is Due.

J. S. GRASTY, PH.D., Charlottesville, Va.

It is a fine service, indeed, that you are constantly rendering the country by pointing so clearly and definitely that its present economic illness is due to the attitude of the Federal Reserve Board.

It is of the utmost importance to keep this constantly before the mind of the public as you are doing, because, although they know that something is dead wrong, they have yet to awaken to the true cause, and you are, as I say, rendering a great service in showing just what that cause is.

The Future of Gold as a Standard of Value

By HENRY STRAKOSCH.

[The Bankers' Trust Co. of New York has issued the following: "A striking survey of the future of gold as a standard of value was submitted by Henry Strakosch of the South African delegation to the International Financial Conference at Brussels during one of the later debates on currency and exchange. Mr. Strakosch, who was born in Austria, acquired banking experience on the Continent, but has been engaged in South African mining and financial enterprises since 1896. During the war he was a member of a committee appointed to advise the Government on matters affecting the Dutch population of the Transvaal, and also of the Central Registration Committee. From a verbatim record of the debate above cited the complete address of Mr. Strakosch is reproduced." The decline in the world's gold production is a very serious situation and demands a broader study than has been given to the subject. Mr. Strakosch's address follows.—Editor MANUFACTURERS RECORD.]

Gold, as the standard value and as the foundation of the currency and credit organizations of the civilized world, has proved so efficient that it cannot be well supposed that it will be abandoned in the future. It is well, therefore, to examine the question of gold production and the uses to which it is put. Those factors are of very considerable importance in the consideration of the currency problems confronting us.

I shall first deal with the question of gold production generally, and especially as it has been affected by the war. The gold production of the world has steadily increased from the year 1893, when its value was £32,000,000, to the year 1915, when it reached the high-water mark of £95,400,000.

Since then it has rapidly declined, until in the year 1919 the value of the total world output was reduced to £72,000,000. Judging from the figures so far available for the current year, one is able, with fair accuracy, to estimate that the yield will probably not exceed a value of £69,000,000, and a review of the position of gold mining generally points to the probability that the world's gold output will show a further decline in 1921, and that from then onward the output will more or less steadily recede.

Decline in Output.

It is interesting to note that the drop in output from 1915 to 1920 has been on an average £5,500,000 per annum. The before-mentioned estimate leaves out of account the possibility of any outstanding new discovery of a gold field such as that of the Rand, in the Transvaal, which today yields 50 per cent of the world's total annual production. I should like to emphasize that the discovery of a new alluvial field even of the size of Klondyke would but slightly affect the position, and that a radical change in gold production can only be expected if, as I have said, the discovery is of an outstanding character.

How Output Is Used.

I will now deal with the uses to which the gold output of the world has been put. Although any figures given in this respect must merely be regarded as approximations—as the statistical data are not as complete as one could wish—it is possible to construct a fairly accurate picture.

Taking the years 1907 to 1913, when the output of gold on an average amounted to 94.7 millions sterling, the available data indicate that that amount has been absorbed to the extent of 22.6 millions (or 23.8 per cent) for industrial purposes and for the arts in Europe and America, while the East, and especially India, has taken 17.7 millions sterling (or 18.7 per cent) of the world's production, so that the world consumption of gold for purposes other than money has amounted to 40.3 millions (or 42.5 per cent). The balance of 54.4 millions (or 57.5 per cent) may be assumed to have been devoted to monetary purposes.

The Movement of Gold.

The destination of gold produced in the Transvaal since the free disposal in the best market of that country's output was permitted in July, 1919, is instructive, not only because there are precise data available, but because they may fairly be taken as indicative of the movement of gold produced in the rest of the

world. From that time down to September 3 last India, the Straits Settlements and coined gold reshipped to South Africa to replace exports of specie from that country to the East have accounted for no less than 59.9 per cent of the gold production of the Transvaal, while 6.5 per cent was used for industrial purposes in Europe, so that a total of 66.4 per cent was devoted to purposes other than money (which compared with 42.5 per cent for the period 1907-1913), leaving for monetary purposes 33.6 per cent (which compared with 57.5 per cent for the period 1907-1913).

The rapidly diminishing world output of gold and the radical change which has taken place in the uses to which that metal is put at present, as compared with pre-war days, deserve special attention. What are the reasons for these phenomena and what lessons do they teach us?

As regards the diminution in output, it is clear that this has been brought about by increased cost of production, which was unaccompanied by a corresponding rise in the value of gold.

Oriental Demand Increasing.

As to the change in the uses of gold, the conclusion is irresistible that the low value of gold, in terms of commodities, has very materially extended the demand for the metal in the East and for industrial purposes. The century-old habit of Eastern peoples, and especially of those in India, to accumulate their savings in precious metals is well known. The vast population of that country, though individually poor as measured by European ideas, is thrifty, and its cumulative capacity for saving great.

While their inclination to invest their savings in silver has always been marked, the increased prosperity of the country and the change in the relative value of gold and silver, i. e., the rise in the price of silver and the fall in the price of gold, have as their natural consequence an increased demand for the yellow metal, for which these Eastern peoples are evidently prepared to pay more than the Western world is willing to give in order to secure it for monetary purposes. The cheapness of gold has also very naturally stimulated its demand for industrial purposes in the West. Hence, the material curtailment of the supply of gold for monetary purposes.

It is not by mere accident that the great economic progress of the world during the last quarter of a century prior to the outbreak of war has coincided with the steady and material increase of gold production. One may fairly conclude that this increased gold production was largely responsible for bringing about the very general adoption of the gold standard, and it is unnecessary to emphasize the inestimable value which the wide adoption of that standard, with its stabilizing effect upon the exchanges, has had upon the economic progress of the world.

Economy of Use.

The prospect of a diminished world gold output very naturally invites consideration of the possibility of measures which have for their object economy in the use of gold for monetary purposes, while the heavy depreciation in the currencies of many of the countries which formerly adhered to the gold standard suggests measures to prevent the value of gold from rising to its pre-war level.

To prevent the value of gold from rising means, in other words, to stop the price of commodities from falling in terms of gold. I, for my part, entertain great doubt as to the possibility of achieving this by international agreement. But, if it were possible, what would be the consequence? The figures which I have given you, showing the material changes in the uses of gold since its price in terms of commodities has fallen, clearly indicate the effect of any attempt to fix the value of gold at its present level.

It would lead to a materially diminishing world output of gold, and, what is more, it would divert, as it has done during the last year, an increasing proportion to nonmonetary uses. It is unnecessary to dwell upon the detrimental and far-reaching effects which would result from starving the monetary systems of the Western world in this manner. Is not, then, the conclusion forced

upon one that it is neither practicable nor desirable to prevent the price of gold from rising in terms of commodities?

Effect of Price Rise.

I should add that a rise in the price of gold, while probably not increasing the world output of that metal, will certainly tend to retard its decline. But, what is more important, it will have the effect—as in pre-war days—of preventing a predominant proportion of the gold output from being used for purposes other than money, so that we may, in these circumstances, again look forward to a very substantial proportion of the gold produced annually being devoted to monetary purposes.

It is true that a rise in the value of gold—connoting as it does a prolonged process of deflation with falling commodity prices—would have detrimental effects on trade and enterprise, and consequently upon employment. But can it be expected that the maintenance of high commodity prices, by a more or less permanent depreciation of the monetary standards, will avert these pernicious effects? I, for my part, doubt it. The ravages of war have naturally very materially reduced the real purchasing power of the people, and that can only be gradually restored by savings resulting from increased production.

A Vision of Hard Times.

Hard times and unemployment there will be, whether commodity prices are kept high—by allowing a greater amount of money to circulate—or whether deflation is practiced, and it is at least open to doubt whether hard times and unemployment, concurrent with a high level of commodity prices, are not more conducive to social upheavals than unemployment which coincides with lower commodity prices. To my mind, the former set of circumstances is the more dangerous to the present order of society.

Influence of Credit Creation.

A word about economizing gold for monetary purposes. Great strides in that direction have been made in the decade or so prior to the war. The progress in that direction is undoubtedly due in a very large measure to the increasing mutual confidence in the methods of money and credit creation practiced by the great commercial nations. This must surely be a *sine qua non* to any attempt at economizing gold for the purpose.

The money and credit policies imposed upon most of the nations—it is true by the hard necessity of war—are not conducive to restoring that confidence immediately. Only the putting into practice of a fixed determination to revert to sound methods can in time re-establish it, and thus pave the way to economies in the use of gold for monetary purposes.

[The MANUFACTURERS RECORD is satisfied that the world must of necessity find some way, other than that of complete dependence upon gold, to meet this truly alarming situation to which we have repeatedly called attention, and no time should be lost in facing these facts.—Editor MANUFACTURERS RECORD.]

Activities in Southwestern Oil Fields.

The first deep well in the old Markham field of South Texas, first developed as a shallow field, is flowing 5000 barrels. It is the property of the Old Colony Petroleum Co., and is in 1600-foot sand.

A report from Eldorado, Ark., is to the effect that the Home Oil Co.'s well, one-fourth of a mile from the Constantin Refining Co.'s gasser in Union county, has been completed and is making 25,000,000 cubic feet of gas. Ten feet of sand was found below 2200 feet.

The Syndicate Petroleum Co. of Stephenville, Tex., advises the MANUFACTURERS RECORD that they have recently closed contract with the Barclay Petroleum Corporation of 35 Wall street, New York, consolidating their interests with that company, who have large interests in Mexico and in the Mid-Continent fields. The company has also absorbed the Stephenville-Desdemona Oil Co., taking over their holdings. Plans are under way for drilling two wells near Breckenridge, in Stephens county. The company also owns leases aggregating 5733 acres north of the new discovery well at Mexia, Tex.

Coal and Coke Production.

The weekly report of the United States Geological Survey on the production of coal and coke says that the production of soft coal during the week of December 4 rose to a new maximum for the year, the total output, including lignite and coal coked, being estimated at 12,757,000 net tons. This figure was exceeded only four times since these reports have been issued, viz., July 10 and 24 and September 25 of 1918 and October 23 of 1919. This new record was possible, it is stated, because the railroads supplied empty cars enough to load 232,340 cars of soft coal. The daily average for the week was 2,126,000 tons. Loadings on Monday and Tuesday of the succeeding week, according to telegraphic reports, were even heavier. For the year thus far production shows 512,431,000 tons, which, although much greater than for the same period of 1919, is not so great by about 33,000,000 tons as for 1918.

Production of anthracite for the same week (December 4) also reached a new maximum for the year, cars loaded indicating a total output, including mine fuel and sales to local trade, amounting to 2,051,000 tons, an increase of 76,000 tons over the latest full-time week, and for the first time since late October the current output has exceeded that of the same week in 1919.

Tidewater dumpings of bituminous coal during November fell below the 5,000,000-ton mark, the total reported being 4,784,000 net tons, a considerable decrease from October figures. The greatest shrinkage was on export shipments, which fell off 848,000 tons, or more than 29 per cent. New England shipments decreased 47,000 net tons, and bunker, inside capes and other tonnage decreased 57,000 net tons. An increase of 506 cars marked the all-rail movement of New England for the week of December 4.

Production of beehive coke recovered slightly, 376,000 net tons being produced during the week, an increase of 9000 tons as compared with the preceding week.

Dumpings of bituminous coal at Lake Erie ports for the week show a total of 473,915 tons, viz., 454,605 tons cargo coal and 19,310 tons vessel fuel, a decrease of 209,655 tons from the week before, but larger than the same week for the past three years.

Tonnage over the tidewater piers for the week ended December 5 amounted to 1,110,000 net tons, an increase of 76,000 tons as compared with the preceding week. Shipments to New England increased 23,000 tons, but exports declined about 11,000 tons. Combined tonnage for bunkering, inside capes, and other business increased 65,000 tons.

Announce Sale of Oklahoma Oil Leases.

Oklahoma City, Okla., Dec. 13.—The commissioners of the State Land Office have issued their formal announcement of the sale of oil and gas leases on January 11. Sixty-seven tracts are advertised, all of them in Kay county but one, which is in Pawnee county. Leases on these tracts expire January 11. They run for five years and renewals are to be for that length of time. Lessees have preference right to release them at appraised values. A majority of them are held by the Marland Refining Co., Cosden Oil & Gas Co., the Empire Gas & Fuel Co., the Sinclair Oil & Gas Co. and the Selby Oil and Gas Co. of Tulsa.

Alabama Farmers Terrace Their Hilly Lands.

Montgomery, Ala., December 8—[Special.]—Practically every farmer in Northern Alabama whose land is hilly and rolling is terracing his hills as a direct result of efforts of the extension service at Auburn, Ala. I. T. Quinn, extension worker for Northern Alabama, reports that thousands of acres of land not otherwise suitable are being fitted for cultivation by these methods.

Tank Distributing Plant for Birmingham.

A distributing plant will be opened at Birmingham, Ala., by the Standard Cement Construction Co. of Wilmington, N. C. It is understood that a manufacturing plant will be established later, although the company advises that full details have not yet been decided. The Standard Cement Construction Co. manufactures concrete septic tanks and other fixtures.

NEWS AND VIEWS FROM OUR READERS

[Publication in this department of letters from our readers does not mean that we either approve or disapprove the views expressed. We believe in a full and frank discussion of the mighty questions of the hour, for only in this way can the truth be found. Therefore we often publish letters with which we do not agree.—Editor Manufacturers Record.]

Sees World Dangers from Far-Reaching Liquor Interest Activities.

WALTER JOHNSON, Dallas, Tex.

The people of the United States are now coming to understand the importance of the contest which the MANUFACTURERS RECORD has waged for Americanism through the late Entente-Prussian War. The work which your magazine has performed has placed it among the first publications of the nation, if not the first in importance.

But how may we conform the recent statement of Marshal Foch, to the effect that the victory of the World War has been permitted to slip out of our hands? While so many assertions are being made by the editorial departments of the newspapers of the nation, the very important assertion of Marshal Foch should not be overlooked. What he said would indicate that the Versailles conference was a practical failure. Marshal Foch did more to bring victory than any other person connected with the war.

The evident fact is that there were two great forces working in unison to reduce the civilized world to autocracy. Those two forces were the former Kaiser of Germany and his armies, and the associated liquor interests, acting the part of spies and financiers for him. The facts are now understood throughout the country that the financial loss to the Government of the United States through the mismanagement of the United States Shipping Board aggregates about two thousand millions of dollars, and in addition to that loss, by mismanagement, there was another thousand million dollars wasted in the aeroplane scandals, and not one aeroplane got to the battlefield from that expenditure. Every department of the Government shows the same inefficiency of management.

When the representatives of this Government look into the facts, one very important conclusion will be reached: The emissaries and spies of the former Kaiser were composed of the agents of the liquor interests. Who ever heard of a Red prohibitionist or a prohibitionist supporting the former Kaiser? The spies, the traitors, the emissaries and the agents of the former Kaiser were the direct agents of the liquor interests.

Persons who now study international affairs should see the earmarks of the workings of the liquor interests and the workings of the former Kaiser as he sits protected in Holland. Mexico, on the south of us, is to be the dumping-ground of the assassins, spies and insurrectionists of the associated liquor interests and the elements opposed to the United States Government. The Irish Republic of New York city is to separate Ireland from England. The Turks are to control the Bosphorus. Greece is to become pro-German, and Russia is to be the breeding-ground of another autocratic government from which is to come the conquering army which is to swarm over the western civilization. Those are the principles of the internationalism which have been so carefully arranged since the signing of the armistice. The Armenians are being put to the sword to rid that part of the danger to the present undertaking of internationalism. The conditions call for an association between France, England, Italy and the United States for mutual protection.

One should see the importance which is being placed secretly on the selection of the Cabinet of President-elect Harding and the importance of that selection to the liquor interests. What influence did the liquor interests work in the Shipping Board and in the aeroplane scandals? What was their work in other places of inefficiency in the late Government service connected with the war? The fact must not be overlooked that those interests want the appointment of the Secretary of State, which would also include the foreign ministry and other appointees of the department. But they want to control the Department of the Navy and the Department of War, and as those emissaries now seek to disrupt the British army by mutiny and insurrection, through the influ-

ence of the many officers, to permit the existence of the Irish Republic, which has headquarters in New York city, they seek also to get as many of their emissaries into the Government service as possible, because of the attitude which they seek to assume in the future. They figure that within 10 years Mexico will develop to the position of a world power, and the length of the border between these two nations will require a mighty army for its protection when the struggle will assume proportions in Southeastern Europe. Religion will be made the principal issue.

There is a reason why the emissaries of the liquor interests want control of the Navy Department. Recently France has begun the building of 200 submarine war vessels for her protection. If the engineers of France are correct in their estimate of efficiency as between the battleship and the submarine boat, we may see the lack of efficiency on the part of the present management of the Navy Department in the construction of the mighty battleships which are costing so much money. The heaviest armor plate falls to pieces like glass when hit by the high-powered explosive shell. A modern battleship is nothing less than a large target. The next great naval battles will be fought with the submarine boats. The liquor interests, in association with the emissaries of the former Kaiser, are at the bottom of the Irish Republic, with headquarters in New York city.

The very first step by the Congress on convening this winter should be to appropriate sufficient money to assist France and a French army in clearing up the Armenian situation, and to place that people under the protection of French guns. The protection of the Armenian Republic is the very nucleus of the Government which will serve as the power to assist in resisting pro-Germanism and German autocracy in Southeastern Europe in the future. One hundred millions of dollars invested there at the present time will save this Government billions of dollars in the future and much bloodshed. The Mexican Government should not be recognized as a free and independent government. It should exist as a government only under the protection of the United States.

Arbitrary Administrative Legislation vs. Commission Regulation.

THE M. FEITEL HOUSE WRECKING CO., New Orleans, La.

Why, if the Department of Justice has the moral and legal right to hold up to public scorn and otherwise punish so-called profiteers, why, I repeat, is not some provision made for justice also to be done in reverse circumstances when the profiteer is forced by other administration departments to do business at a loss?

Of course, everyone must realize that legislative action was necessary to prevent our sorely burdened financial structure from becoming top-heavy, but the legislation which we are now suffering from is, in my humble opinion, too highly tempered and should be softened.

I submit as an illustration of efficient common sense commission regulation our present Interstate Commerce Commission, and invite from you a discussion as to the practicability of employing like commissions, subject to the same legal restrictions, to regulate all commerce having as their objective the meting out of real justice to all in a common-sense, businesslike way.

Why not have such a "Federal Textile Commission," a "Federal Food Product Commission," etc., with the authority vested in them similar to that of the Interstate Commerce Commission, with variation only in order to meet the different circumstances that might be involved due to fundamental differences applying to the other branches of industry involved? Why not?

THE IRON AND STEEL SITUATION

Increased Production by Steel Corporation But Decreased by Independents—Increased Buying Expected After First of New Year.

Pittsburgh, Pa., December 13—[Special.]—Production of steel ingots in the United States in November was at a rate about 15 per cent less than the rate that was quite uniformly maintained in August, September and October. The rate at present is much less, as there has been a continued decrease in independent mill operations since late in September or early in October. The Steel Corporation, however, is operating at a somewhat heavier rate than formerly. The corporation has been endeavoring to produce every ton of steel possible, while most of the difficulties disappeared some time ago, the fuel shortage did not entirely end until very recently. Accordingly, the corporation has blown in several additional blast furnaces in the past few weeks.

Steel production by the industry, as a whole, is probably at a rate between 70 and 75 per cent of the average rate in August, September and October, this being made up of the Steel Corporation producing a little more than formerly, and the independents producing less than 50 per cent as much as formerly. By the end of the year the independent production will be extremely light, many plants being closed entirely, with others operating at only 50 to 75 per cent. A common practice until conditions improve will be for a mill to remain idle two or three weeks to accumulate specifications and then run moderately full for a week or two. Costs are extremely high when a mill runs at under 60 per cent. The independents frequently refer to the Steel Corporation having low costs, but the corporation's low costs are due, in part, to its moderation in the matter of prices, whereby it has steadier and fuller operation than the independents.

Steel Corporation Orders.

The Steel Corporation's unfilled obligations decreased during November by 815,371 tons, to 9,021,481 tons at the end of the month. The November decrease compares with decreases of 537,952 tons in October, 430,234 tons in September and 313,439 tons in August. Considering the extreme dullness of the steel market in November, and the large volume of cancellations experienced by the independents, the Steel Corporation made a very favorable showing for the month. Its shipments were probably about 80 per cent of capacity against 87 per cent estimated for October and 85 per cent for September, and as the decrease is unfilled tonnage represented about 61 per cent of capacity, it is evident that there were net bookings of about 28 per cent of capacity, the net bookings being the total bookings minus the cancellations, for even the Steel Corporation had a few cancellations, particularly of export orders. Many of the independents no doubt had a decrease in unfilled tonnage in November greater than the shipments, through the cancellations exceeding the new bookings.

Prospects for Demand.

From the viewpoint of the independent producers the steel market is absolutely stagnant, with only occasional inquiry, and that for no important tonnage. This does not represent a cessation of consumption by any means. Consumption has, of course, decreased very considerably, but it has not stopped. Inasmuch as all consumers are desirous of having their stocks as low as possible on January 1, the inventory date, the consumption is probably running in excess of the deliveries, on the whole. Furthermore, while there is, except in the case of pipe, very little demand upon the independents either by way of new buying or by way of specifications against contracts, there are the shipments of the Steel Corporation, which are almost at capacity, and the corporation has about 44 per cent of the total capacity of the country. When the Steel Corporation is operating so well, the dullness seen in the open market cannot by any means be taken as the real measure of the consumption of steel that is occurring.

There are data available whereby the situation and prospects can be described in more detail. During the first nine months of the year, when steel was very scarce, the production of steel

ingots was at the average rate of about 42,000,000 tons a year, while the capacity may be estimated at about 52,500,000 tons. Thus the operation average 80 per cent of capacity. Production was not larger because there were physical difficulties in the way, particularly shortage of cars and shortage of fuel. There was no shortage of orders. All the steel produced in the nine months was consumed, doubtless, and the rate of consumption was considered a very high one. The Steel Corporation has about 44 per cent of the capacity, or about 23,000,000 tons ingot capacity per annum. If the Steel Corporation operates at 90 per cent of capacity, and while it may not have operated as well as that in the past it is now increasing its operation, it furnishes steel equal to 40 per cent of the total capacity. If the independents, having 56 per cent of the capacity, operate at 36 per cent of their capacity, they furnish steel equal to 20 per cent of the total capacity. The 40 per cent from the Steel Corporation and 20 per cent from the independents make a total of 60 per cent, just three-fourths of the rate at which steel was consumed during the nine months, in which there was a very heavy demand. In these dull times a reduction of only one-fourth in the steel demand would be a small reduction, yet it will be seen it would provide only a 36 per cent operation for the independents. At the end of the year the independents will probably be averaging less than this rate, many being closed entirely to allow orders to accumulate.

The common prediction is that there will be a mild revival of buying in steel products immediately after January 1, and that will presumably occur, as buyers cannot stay out of the market indefinitely, but it seems quite improbable that there will be enough buying to give the independents a fair rate of operation. The country must complete its readjustment before there can be a full demand for steel.

Manufactured Steel Goods.

There is no doubt that in the great majority of cases the selling prices of manufactured steel goods of various sorts, made from the rolled-mill products as raw material, have been based upon the high prices charged by the independent steel mills rather than upon the more moderate prices to which the United States Steel Corporation adhered, and with a large margin of profit added besides. Now that the independent steel market has come down to the Steel Corporation level, except in pipe, where there is only a difference of \$7 a ton, however, the prices of manufactured goods should experience heavy reductions, or the benefit of the steel mills reductions, by way of consumption being encouraged, will be lost. In most cases the steel mill does not sell to the ultimate consumer, but to manufacturers who produce wares of various sorts. Thus far the declines in the manufactured goods that are sold to the ultimate consumer have not been as great as is necessary to complete the readjustment. The steel makers will naturally become impatient if such declines do not occur, as they are anxious to see their business revive, and it cannot revive until the ultimate consumer is satisfied that prices are on a safe basis.

Pig-Iron.

Merchant furnaces continue to go out of blast, and nearly if not quite half the Northern merchant furnaces are now out. The situation has changed very suddenly, as three or four months ago the furnaces were under heavy pressure by customers to make heavier shipments. At that time, however, the furnaces were not well sold ahead, and thus it is not particularly remarkable that they have run out of orders suddenly. There is no disposition on the part of any furnace to cut prices to force buying so that the furnace may remain in blast. It would be impossible by this method to get enough business, for the furnace must either produce at capacity or not produce at all, and with costs so very high it would be ruinous to pile iron. Accordingly, one furnace after another is quietly blowing out to await the arrival of better times. Meanwhile costs will go down. Coke, for instance, which the furnaceman feels has been selling at outrageous prices, will have to adjust itself. Furnaces claim that for months some of the Connellsville coke operators were making 100 per cent a month, and that until coke operators become content with, say, 12 per cent a year, or one one-hundredth as much, it will be well to remain idle.

Quotations on pig-iron are largely nominal. Bessemer remains quotable at \$35, valley, and basic at \$33, valley, while foundry is regarded as quotable at \$35, as against \$37 a week ago. It is considered improbable that prices will decline much more until demand revives, and there is some incentive to name competitive prices to get business.

Birmingham Steel Mill Operations Good and Much Steel Being Fabricated—Coal Production Steadily Increasing Despite Strike.

Birmingham, Ala., December 13—[Special.]—Sales of pig-iron made by furnace companies of the Birmingham district are few and in very small lots. Several carlots have been sold at \$38 per ton, No. 2 foundry, 1.75 to 2.25 per cent silicon, while some sold for \$42 per ton price, and furnace companies still claim that the latter price must be considered in the general business. There is a little better feeling, as some inquiry for iron is received. The inquiry went as high as 1000 tons, with delivery stipulated during the first quarter of the coming year, but the business has not been booked as yet and cannot be considered as assured. However, it is some feeling out of the market, and may be indicative of need for iron. The general opinion here is that many of the consumers are holding off from the market until after inventory-taking time.

Production in Alabama is off considerably, but the make for the year will exceed that of 1919. The make in this State in November was under 168,000 tons, the lowest monthly production in a long while. Less than 20 blast furnaces are now in operation. It is not improbable that one or two other furnaces will be blown out before the turn in the market conditions; in fact, two furnaces of one company will be kept in operation until there is need for repairing, when not only will the furnace lining be given attention, but improvements be made on the entire furnaces. However when there is a resumption of operations the make will amount to something.

There is around 100,000 tons of pig-iron in Alabama furnace yards, the greater bulk of same being foundry iron. Of course, it is understood that this iron piling is the result mainly of instructions to hold up delivery on old contracts. The home melt is also steadily falling. The prospects are that within another week or so the melt will be down to the minimum, some plants now operating more or less considering cessation over the holidays. The furnace companies in the Birmingham district, which have a considerable tonnage of iron ore, coke and other raw material piled up, are not anxious to use this up, these companies in particular having closed down furnaces until such time as the market warrants the continued production of iron. Consumers, however, are willing to continue operations, in some instances, until the raw material on hand has been melted. The larger industries in this class are not to be included, for the cast-iron pipe plants, as well as the sanitary-pipe works, are reducing production just as quickly as possible.

A lower quotation on charcoal, now down to \$50, is announced. Sales were made in this district around \$60 per ton. The present demand for charcoal iron, in comparison to the amount being made, is better than for foundry iron.

A hopeful view is noted among iron and steel men. The belief is held here that the readjustment plans have about met the minimum stand. Some attention is being attracted to the railroad needs, and on the turn of the year it is believed that business placed by these interests will be felt.

Shipments of pig-iron from the South are very light, as compared to what they were a very few months ago. Furnace companies are still urging consumers not to cancel orders, and as the end of the year approaches there is more hope that it will not be long before instructions will be received to start shipping again.

Presence in the Birmingham district recently of Admiral Graca of the Brazilian Lloyd Steamship Lines is believed to be fraught with great possibilities. Announcement of plans are made of regular sailings between Mobile and New Orleans and Brazil. Admiral Graca was well pleased at the sights shown him and the business interviews he had here, and feels confident there will be a better understanding before long between the two countries.

There has been a call for more tonnage to accommodate sailings from the ports through which Birmingham-made products are

moved. Steel shapes are passing through Mobile bound for Rotterdam, China and Japan. Central America is getting some steel rails from this section. Movements of sugar machinery, engines and other things from this district to Cuba are still of considerable tonnage. A large tonnage of cast-iron pipe is passing through Mobile from Alabama plants en route to Pacific Coast points.

The steel mill operations are fairly good in this district, the Steel Corporation plans holding up the average well. It is reported that the corporation has a monthly production around 94,000 tons of pig-iron, though basic iron is the greater portion of the production. There is still much steel being fabricated and used by the Chicasaw Shipbuilding & Car Co., subsidiary organization of the Tennessee Coal, Iron & Railroad Co., in shipbuilding. Wire mills report an excellent demand for wire nails, and were other departments in the mills as well pleased with business there would be necessity for full operations all around. Nails are being shipped from this district as rapidly as the product can be turned out.

The coal production in Alabama is steadily increasing, and it will not be long now before the domestic coal output will be sufficient for all needs. The leaders of the United Mine Workers of America are continuing the strike and fight for recognition of the union. Another meeting was held the past week by the officers of the various local organizations of the union, and, with the international organization footing bills, providing provisions and a little clothing and wearables, the declaration was made that the strike would be continued to a finish, and that there was no doubt that the operators would be required to recognize the union. On the other hand, the coal operators of this State are determined not to recognize the union, and have positively asserted there will be open-shop plans put into effect in operation of the mines. Several mining camps have individual contracts with employees. The military forces of the State are still on duty in this district, and general orders issued prohibiting mass meetings will be continued. The union men have prepared a plan of picketing, and there is much interest manifested as to how this will be done.

The coal production for the week ending December 4 was around the normal figure, amounting to 302,866 tons, reported to the Government at Washington. This is the largest output since the strike began in September. The figures for the week ending December 11 will show a further increase, and the situation grows brighter every week. Some railroad car shortage is still complained of. The first week of the strike in September saw the coal production in Alabama go down to 197,079 tons.

The coke production is still steady, but the market is very weak. Furnace coke is being priced at from \$7 to \$10, and foundry coke from \$9 to \$12. Spot coke, in small lots, can be purchased at a cheaper price than on contract. Some intimation is given as to contracts for coke, delivery next year, and there is belief that a little later some healthy business will start up. The by-product coke is being produced still at a lively pace. Independent coke makers have contracts on hand on which delivery is being made.

Scrap iron and steel dealers are still hopeful that after the new year sets in there will be some demand for their products, and all dealers here are in position to take contracts and assure delivery. There has been some further weakening in the price list of old material, but the list does not have any great significance. The quotations given, in other words, not being rigidly adhered to. All old-material yards in this district are well supplied with stock.

Quotations for pig-iron and iron and steel scrap in the South are as follows:

PIG-IRON.

No. 2 foundry, 1.75 to 2.25 per cent silicon, f. o. b. furnaces, \$38 to \$42; No. 1 foundry, 2.25 to 2.75 per cent silicon, \$39.25 to \$42.25; iron of 2.75 to 3.25 per cent silicon, \$40.25 to \$44.25; iron of 3.25 to 3.75 per cent silicon, \$41.25 to \$45.25; iron of 3.75 to 4.25 per cent silicon, \$42.25 to \$46.25; charcoal iron, f. o. b. furnaces, \$50.

OLD MATERIAL.

Old steel axles.....	\$26.00	to	\$28.00
Old iron axles.....	24.00	to	26.00
Old steel rails.....	18.00	to	20.00
Heavy melting steel.....	15.00	to	17.50
No. 1 R. R. wrought.....	16.00	to	18.00
No. 1 cast.....	24.00	to	26.00
Stove plate.....	24.00	to	26.00
Old car wheels.....	26.00	to	28.00
Old frame wheels.....	25.00	to	27.00
Machine-shop turnings.....	10.00	to	11.00
Cast-iron borings.....	10.00	to	11.00

LUMBER AND BUILDING MATERIALS

Utilization of Cut-Over Timber Lands for Development of Paper Industry and the Manufacture of Pine-Tar Products.

New Orleans, La., December 11—[Special.]—That the "piney woods belt" of East Texas would be a splendid location for the establishment of wood pulp and paper mills is the opinion of Walter S. Ayres, industrial commissioner of the New Orleans Great Northern Railroad, who recently visited the plant of the Great Southern Lumber Co. at Bogalusa. Although there are approximately 250,000,000 acres of land in the South either cut over or to be cut over, there are but three Kraft paper factories in operation, he stated, including the one at Bogalusa, another at Orange, Tex., and a third at Moss Point.

Regarding the possibilities of developing the paper industry in Texas, Mr. Ayres said: "It is estimated that the East Texas timber belt alone comprises 21,000,000 acres. In the pine belt it would appear that paper mills could be established at, say, intervals of 200 miles. The campaign of the Texas Chamber of Commerce to secure such factories for East Texas is commendable. A good market would be near at hand at Dallas, which, I understand, is the largest paper-distributing point in the Southwest.

"Truly science has solved the cut-over timber land problem for the South, it would appear," he said. "Only a few years ago it cost up to \$30 an acre to have land cleared. Now, after the lumber mills pay for the merchantable timber, the paper factories buy the small trees, tree lops and waste from sawmills, and then come the pine-tar products factories, that will pay for the privilege of removing the stumps. Bogalusa, 12 years old, has attained a population of 16,000, largely because of the activity of lumber interests. With dwindling pine forests, it proposes to become the Southern metropolis of paper making.

"On tracts that are to be left as woodland the sawmills skip the trees that are seed bearing but not merchantable. After 10 or 15 years the offspring will be large enough for paper making.

"Unless reforestation is generally adopted," Mr. Ayres added, "the time will come when poor people will have to live in tents or makeshift dwellings with walls of tar paper. The nation is short hundreds of thousands of homes. It is estimated that by 1930 the South will be producing little more lumber than its own requirements."

At Hattiesburg and Gulfport, Miss., powder companies, after several years' experimenting, have succeeded in the profitable operation of pine-tar products plants, and accordingly stumps will be removed from thousands of acres of land to be used in manufacturing a variety of valuable products. An essential oil plant will also be erected at Bogalusa, according to the latest information.

Activities of Southern Pine Lumber Mills.

New Orleans, La., December 9—[Special.]—For the week ending December 3 reports of the Southern Pine Association from 144 mills are as follows:

	Cars.	Feet.
Orders on hand beginning of week.....	11,129	242,871,920
Orders received during the week.....	2,056	44,905,096
Total.....	13,176	287,777,016
Shipments during the week.....	2,453	53,575,973
Orders on hand end of week.....	10,723	234,201,043
Total Feet.		
Orders		44,905,096
Shipments		53,575,973
Production		57,225,546
Normal production these mills.....		96,105,068

Shipments were 6.38 per cent below production for the week, while orders were 21.53 per cent below production, and 16.18 per cent below shipments.

The production was 40.46 per cent below normal. Shipments were 44.25 per cent below normal production, and orders were 53.28 per cent below normal production. There was a decrease in "orders on hand" during the week amounting to 3.57 per cent.

Importance of Wood in Freight Car Construction.

New York, N. Y., December 13—[Special.]—The fact that over 2,000,000,000 feet of lumber and timber are used annually in the United States for the maintenance of freight-car equipment and for the construction of new cars, representing an annual outlay for material alone of over \$50,000,000, is ample evidence of the importance of wood in this big industry, says Mr. H. S. Sackett, assistant purchasing agent of the Chicago, Milwaukee & St. Paul Railway Co., in an address this week in New York city before the American Society of Mechanical Engineers.

Statistics gathered by operating officials of some of the larger railway systems seem to indicate, says Mr. Sackett, that the cost of maintaining steel gondola cars over a period of years is greater than for composite (wooden or steel) cars of the same type. The data collected show that all-steel gondola cars in their 12 years of service cost over 36 per cent more to maintain than did the composite gondola. The initial cost of the composite gondola car is less than the all-steel gondola, and the sides of the composite car do not bulge as do those of the steel car. Another advantage of the composite type is that certain properties in coal cause corrosion to steel, and wood is not affected by them.

In the case of closed-top cars, such as stock, box and furniture cars, under present railroading conditions, the under-structure should be of steel, says Mr. Sackett, and the super-structure of wood. All-steel cars are too heavy to be popular; in fact, no material yet discovered combines the properties of strength, lightness, availability and ease of working, such as possessed by wood.

It is also rather curious that the salvage value of wooden cars is greater than that of steel cars. The wooden car may be quickly and easily repaired, while the steel car is rehabilitated only at a high cost, or is scrapped.

Memphis Hardwood Outlook Grows Brighter.

Memphis, Tenn., December 11—[Special.]—It is believed that the low price level for hardwood has been reached, and that prices are now on the ascendancy. Inquiries are more numerous than for many months, and quite a number of large orders are being booked for export and for domestic consumption. Several inquiries revealed the fact that buyers are willing for shipments of purchases early in the new year. After the holidays a general increase in business is looked for.

The manufacturers and dealers are looking forward hopefully to the new year, confident that the slump is passed. One of the surprising facts is that despite the little buying that has, however, continued steadily there has been quite a reduction in the supply of many items of high-grade lumber. This has resulted in a generally stiffening of prices for first and second grades of hardwood. The extent of curtailed production is just beginning to be realized, not only in the producing territory, but in the consuming territory as well. It is now seen under an aggressive buying campaign high stocks might be quickly wiped out.

The mill operations that have been closed down recently will probably remain out of the production field until spring. It is probable that bad weather will set in shortly, making logging operations difficult; hence those mills that are still operating are doing everything possible to get their logs to the mills and to manufacture them into lumber.

Frame Church in Maryland 238 Years Old.

Easton, Md., December 13—[Special.]—The durability of wood as a building material is strikingly emphasized in the old Quaker meeting-house at Easton, Md., built in 1682-1684, and probably the oldest frame building in the country without additions or alterations from the original structure. Its frame, inside woodwork and some of the weatherboarding is the same as when built in the days when William Penn, who visited the building, was laying out the city of Philadelphia. The structure is 60x44 feet, and is made from white oak, white pine and cypress from the Maryland forests.

The church is still a place of worship and has been visited and attended by many notable persons.

Growing Demand for Southern Pine in Millwork.

"Owing to the great depletion of white pine in the Northwest and East, and to the limited stand of cypress in the South, millwork manufacturers east of the Mississippi River, also those in Texas, Arkansas, Missouri and several other States, must very naturally turn to the Southern pine as their most economical and accessible source of supply of raw material, and, indeed, those who fully understand the situation have been filtering in Southern pine for several years past," according to C. B. Harman, secretary of the Southern Sash, Door and Millwork Manufacturers' Association of Atlanta, Ga., writing to the MANUFACTURERS RECORD.

Mr. Harman believes that the use of Southern pine for manufacturing millwork, windows and doors will prevail longer and over a wider territory than any other wood. Many varieties of short-leaf pine are prolific in reproduction, easily reforested, and the indication is, if properly handled, this variety can be made to produce a perpetual supply sufficient to meet the domestic demands of the United States. Heretofore this wood has been carelessly used and handled, but when properly used is suitable for making doors, windows and millwork that are durable, beautiful and no more expensive than any other variety of pine.

All wood used for this purpose must be properly seasoned, and authorities say that Southern pine is quickly and easily seasoned. Although a little harder than some other soft woods, it works easily when knives and bits are tempered properly, and when manufactured will remain right and last as long as any other wood if painted and finished with proper care.

According to Mr. Harman, the sap wood is preferable to heart, for it is softer, and, being more porous, contains less resin and turpentine; takes stain, varnish and paint easier; is more free of knots, pitch pockets and other defects.

Seventy-five per cent or more of all the windows, doors and millwork used in the South are manufactured of Southern pine. Many fine old structures stand as monuments to the colonial days with the wood "sound as a dollar," Southern pine having been used throughout.

Concerning the use of Southern pine for such products, Mr. Harman states that to get the best results the wood should be nicely cleaned with a steel scraper, rubbed down carefully with sandpaper before painting or staining. This will prevent shrinking and checking, as it closes up the pores of the wood and keeps out the moisture of the air. Where work is to be painted or stained very dark blue or sap, stain is no objection, for after being covered no one ever sees the discoloration, which does not interfere with the lasting quality of the lumber. Natural or white-varnish finish is the highest test to which Southern pine can be put, as this kind of finish fails to give protection from the light, yet if the work is properly prepared, results can be obtained equally as good as when hardwoods are used.

The first cost of Southern pine is said to be no more than any other of the woods used for the purposes mentioned, and it is generally known that there is less waste in the first two higher grades.

There are 250 millwork factories in the South manufacturing products throughout the year and using 80 per cent or more of Southern pine in their products. This wood is being used by many of the Mississippi River and Northwestern factories in making door panels, in connection with white pine stiles and rails. They are also using it for making window sash, moldings, inside trim, stair materials, etc.

Southern pine veneers, rotary cut, are beautifully marked, and give very attractive effects. They can be used for gluing against any other kind of wood if thoroughly seasoned and cleaned before applying.

Birmingham Lumbermen's Club Elects.

Birmingham, Ala., December 11—[Special.]—Officers of the Wholesale Lumbermen's Club were recently elected here as follows: J. J. Laumer of the Laumer Lumber Co., president; L. A. Baker of the Baker-Reid Lumber Co., first vice-president; J. G. McCormick of the McCormick Lumber Co., second vice-president, and A. J. Ribe of the Traffic Bureau, secretary and treasurer.

Hardwood Timberland Development in Kentucky Grows.

Whitesburg, Ky., December 13—[Special.]—Eastern Kentucky hardwood development is to have another project, according to an announcement just made at Ulvah, a few miles from here. The Continental Car Co., Louisville, purchased a large tract of hardwoods on Line Fork Creek, a few miles from the Louisville & Nashville main line, and are busy installing a large sawmill. The company will make a specialty of car material to be used in the company's plant in Louisville. It is said that several years will be required to cut the timber.

Nearby the Louisville Cooperage Co. have representatives closing deals on some interesting hardwood tracts, upon which they plan the installation of stave mills at an early date. This concern already has some good-sized saw and stave mills in the vicinity of Pershing, on the Louisville & Nashville main line.

Hardwood timber development is being extended into some of the remote and out-of-the-way sections of Eastern Kentucky. There is more timber development in prospect than ever before in the history of the development of this section.

New Factory Established at Bogalusa Will Make Essential Oils from Cut-Over Timberland Waste.

Bogalusa, La., December 8—[Special.]—The Essential Oil Co., a Pennsylvania corporation with a domicile at Philadelphia, has closed a deal for the purchase of the old plant of the Louisiana Fiber Board Co. at Bogalusa, and will remodel and rebuild it for the purpose of extracting rosin, turpentine, pine oil and perfumery from pine stumps. The perfumery will be used in the manufacture of toilet soaps.

The company will use pine stumps from cut-over lands in this section. A blasting process will be used in removing the stumps from the land. This will aid in the opening of vast areas for farming and reforestation purposes. Heretofore pine stumps on cut-over lands have been in the nuisance class. Now they will have a market value.

The new factory was located at Bogalusa through the efforts of the Great Southern Lumber Co. and the Goodyear interests.

Will Develop Timber and Mining Lands.

Work is being rushed, it is reported, to complete the line of the Tuckasegee & Southeastern Railway from Sylva to Tuckasegee, N. C., 15 miles, which is being built by the Blackwood Lumber Co. to develop great hardwood timber tracts, mines and farming lands. Track is laid already to Love Gap, and the grade is finished as far as the Tuckasegee River, that will be crossed twice by the line, with bridges 175 feet long. H. M. Luck, contractor, of Roanoke, Va., is supervising the work, which is being done by company forces. The road is designed to be eventually 35 miles long from Sylva to Lake Toxaway. James M. Walker of Roanoke; Joseph Kays of Washington, D. C.; N. M. Davidson and V. R. Rieley of Sylva, N. C., and others are interested in the development.

Drilling Deep Wells in Panhandle of Texas.

Amarillo, Tex., December 9—[Special.]—Judge E. C. Gray of Higgins, principal man behind the deep test well that is being drilled two miles from Higgins, announces that drilling has been resumed at 3002 feet, and that money for its completion to 3500 feet or deeper is available. Geologists report that cuttings from the well are favorable for oil or gas.

Four other wells in the Panhandle are now drilling below 3000 feet. These are the Miller, in section 59, Potter county, shut down awaiting supplies; the Purviance, in section 12, Carson county, shut down at 3000 feet awaiting arrival of company officials from New York; the Seven States, section 127, Potter county, with casing set at 3500 feet, and the White-Parks, drilling below 3600 feet. It is reported that this well is to be shot with 1200 quarts at 4000 feet.

The Humble Oil & Refining Co. has cased off the upper gas in its well on the 6666 Ranch, in Carson county; has the 12-inch set at 1888 feet, and is deepening the hole. It is said to be prepared to cope with a heavier gas flow if encountered.

GOOD ROADS AND STREETS.

Virginia Good Roads Association Plans Educational and Membership Campaigns—Moving Pictures to Play an Important Role in Drive in Improved Highway Expansion.

Richmond, Va., December 11—[Special.]—Highway development in this State will be greater during 1921 than ever before in its history, according to officers of the Good Roads Association. Plans have recently been completed for expansion of the organization's work in furthering road building and maintenance since the adoption of the good roads amendment to the Constitution.

It is planned to send motor trucks throughout the State equipped with motion-picture machines and portable screen for the exhibition of many subjects connected with highway improvement. Besides, it will be possible to show the pictures indoors the necessary electric power to be furnished by special generators placed on the trucks. Field secretaries of the organization will travel with the trucks and give short talks.

This plan, it is believed, will furnish one of the most complete systems ever adopted for carrying the good roads message to people even in the remotest sections. Efforts will be made to impress upon the people the direct and indirect losses resulting from bad roads, and a State-wide educational campaign, similar to, but on a more extensive scale than that conducted during the fight for passage of the amendment, will be waged.

In order to increase the membership, meetings will be held in the various towns and cities under the direction of Gen. C. C. Vaughan, Jr., president of the association. The new goal sets 75,000 as the number of additional members desired.

Work has already begun in the Norfolk and Richmond districts, embracing more than half of the State. It is hoped to secure 45,000 of the new membership in these localities. Other influential organizations will lend their aid in making the campaign a success.

Virginia Highway Meeting at Roanoke.

Roanoke, Va., December 11—[Special.]—Good-roads advocates from all sections of the State will gather here on January 26 for the annual convention of the Good Roads Association. Highway problems in the State and the opportunity for much greater development of the highway system through the passage of the recent good-roads amendment will be discussed. The convention will be in session January 26, 27 and 28 at the Hotel Roanoke.

The program includes addresses by prominent leaders in good roads work from various parts of the Eastern United States. Among the topics to be discussed will be: "What We May Expect from Tourist Travel," "The Changing Road," "Highway Financing," "The Relation of Highways to Better Schools," "Developing Our Highways," "Women's Interest in Highways" and "Federal Aid."

The attendance will probably be larger than ever before, due to the increased membership and influence gained following the successful campaign for the passage of the good-roads amendment. Officers and members of the executive committee for 1921 will be elected.

Last Toll Road in Maryland Passes.

The last toll road in Maryland has fallen before the onslaught of modern free roads. Negotiations have been closed for the sale of "The Frederick and Woodsboro Turnpike" for \$40,000. After December 15 every road in Maryland will be free to traffic.

"I am much gratified that through the purchase of the Frederick toll road we have eliminated the last toll pike in the State roads system," said Chairman Mackall of the State Roads Commission. "This road has been a parasite on the State highway system for years. Tourists from Washington, through Frederick en route to Gettysburg, were taxed by the owners. A check on the travel and receipts of the company for the week ending November 29 showed the tollgate took in \$508.45. This would mean that autoists using the road must pay the owners \$27,000 a year to travel over less than a mile of road, for that is about all that was needed to connect the State roads."

Elaborate System of Hard-Surfaced Roads.

Muskogee, Okla., December 11—[Special.]—With nearly 50 miles of improved highways practically completed, county officials are planning an additional expenditure of \$400,000 during the coming year. It is hoped to build a system of highways at a total cost of \$2,000,000, together with Federal aid, so that the county will have a complete system of highways in good condition the year 'round. Special taxes are being used for road building.

The principal link in the stretch of roads completed during 1920 is the 30 miles of hard-surfaced road on the Jefferson Highway. Before the program is completed every town in the county will be connected with hard-surfaced roads. The first link of the highway system was built of clean gravel from the Arkansas River, and was laid eight inches thick, with a shoulder three feet wide on each side. In the construction of the second link gravel was laid on the clay of the roadbed, and a large plow used to turn the gravel into the clay and the surface rolled. This made a hard, compact road, which improved after becoming wet and then packed.

In order to keep the roads in repair a patrol system will be started this month for maintaining the highways. It has been found that gravel and men will be employed to patch the roads just as soon as holes begin to show up.

Oil will be used in experiments to determine if it will aid in preserving the hard-surfaced highways, and calcium chloride is being used to keep down the dust. All possible methods will be tried to get the best possible results from the gravel roads.

One of the features of the Jefferson Highway is the new route paralleling the Katy Railroad, and which reduces its length $4\frac{1}{2}$ miles from the old section of the route, thus bringing 100,000 acres of land an average of 2.25 miles nearer to a central market.

It is believed that the construction of this road will greatly increase the value of property along the route. Farmers can now bring their goods to market at any season of the year, where formerly it was necessary to haul them whenever the roads were in good condition.

The action of the county in building the highways over the new route resulted in a saving of \$45,000 in construction costs for grading, draining and building. If the action of this county is followed in building the highway along the railroad route, at least 35 miles of roadway can be eliminated along the Jefferson Highway.

South Carolina Registers 93,733 Motor Vehicles.

Columbia, S. C., December 10—[Special.]—Secretary L. H. Thomas of the State Highway Commission announces that during the first 11 months of 1920 93,733 licenses were issued to motor vehicles in South Carolina. The licenses, together with certain reimbursements to the departments from highway funds, make a total of receipts for the highway department of \$553,441. The department paid to the counties during the first 11 months of the year the sum of \$422,110, this being 80 per cent of motor-vehicle license money due to the counties. The State fund received \$105,527.

Completing Road in Arkansas Agricultural Area.

Springdale, Ark., December 11—[Special.]—One of the most productive agricultural regions in Madison and Carroll counties will be opened up with the completion of the new highway from Eureka Springs to Huntsville. Grading on the roadbed has about been completed, and gravel is now being put on. For the most part the highway is built upon gravel soil. Automobilists are now making the trip between the two towns, a distance of about 30 miles, in little more than an hour.

Bad Stretch of Dixie Highway Rebuilt.

Jacksonville, Fla., December 11—[Special.]—The portion of the Jacksonville-Tampa Highway leading out of Kissimmee has been placed in good condition, and is now open to traffic. According to J. D. Woodbeck, secretary of the Chamber of Commerce at Kissimmee, from that town to Tampa there is now a well-paved road, and as far as the Dixie Highway is concerned, no more detours will be necessary along the famous highway.

Enormous Increase in Federal-Aid Road Projects— Report for Fiscal Year 1920 Shows New Projects for Single Year Exceed All Previous Work Done Under Act.

Washington, D. C., December 13—[Special.]—In spite of the untoward economic conditions, the amount of Federal-aid business handled, as represented by the number of projects, was approximately 25 per cent greater during the fiscal year ending June 30, 1920, than all previous work done under the act since 1916, according to the annual report of the Bureau of Public Roads of the Department of Agriculture. An average of 139 new projects was received and approved monthly.

The amount of appropriations which became available at the beginning of the year was \$95,000,000, in addition to \$77,600,000 previously apportioned for the fiscal years 1917 to 1919, inclusive, so that the total amount that has been apportioned up to and including this fiscal year is \$169,750,000.

A total of 1670 projects submitted were approved, as compared with 1316 projects approved from 1916 up to the beginning of the past fiscal year. This year's projects involve 16,673 miles of road, as compared with 12,720 miles which had been previously approved. The Federal aid requested on new roads amounted to \$109,830,366, which was more than twice as great as the total amount of \$54,714,219 requested for the years 1917, 1918 and 1919.

The rate of expenditure is increasing rapidly from month to month as more and more projects which have passed through the preliminary stages get under construction. The expenditure of \$80,000,000 for the year will be greatly exceeded next year.

Federal-aid road work has been greatly hampered during 1920 by the most disadvantageous economic conditions this country has faced in many decades, according to the report. Railroad congestion, strikes, and labor and material shortages, resulting in high prices of these essentials of construction, combined throughout the country to delay work which has been undertaken and to discourage the undertaking of any but the most important new projects. The high prices of labor and material have sent construction costs skyward, and the work which has been launched in spite of conditions has necessarily been curtailed to the limit of the funds available.

"Highway construction has perhaps been more adversely affected than any other class of work. After the war there was a great public demand for the improvements of roads which had been seriously damaged in many instances by the augmented traffic incident to the prosecution of the war. It appeared that the release of labor from war activities and the return of men from the military service would provide an abundance of labor. Indeed, it was thought for a time that highway work should be increased to provide employment for returned soldiers, if for no other reason. Highway improvements were accordingly greatly expanded, and in accomplishing this result the appropriation by Congress of the additional sum of \$200,000,000 for Federal aid in February, 1919, played an important part.

"The army of laborers which was expected to apply for the work did not materialize. On the contrary, there has been at all times a distinct shortage of labor to carry out the work planned, and wages during the past fiscal year have reached the highest levels attained in the history of the country."

Similarly, the report states, there has been a pronounced scarcity of construction materials, prices having advanced from 50 to 100 per cent, with the result that earth roads increased from 1917 to 1920 from \$2160 to \$4100 a mile; sand-clay roads from \$2460 to \$4685; gravel roads from \$4535 to \$7250 a mile; concrete roads from \$21,165 to upwards of \$40,000 per mile, and a mile of brick road which in 1917 could have been built for \$33,000 now costs \$55,000.

The report adds: "Contractors who have been induced to enter the highway field in larger numbers than ever before, and who have invested large capital in plant and equipment designed to expedite construction, have lost heavily by reason of the failure of the railroads to make deliveries of material in accordance with anticipated schedules, and they have advanced their prices on subsequent contracts in an attempt to recoup their previous losses and to provide against similar contingencies in the future."

Everything possible has been done to assist the State highway

departments in meeting their rail transportation difficulties, and the bureau is shaping its organization so that it will be possible in the future to render greater service in this connection than it has been able to do in the past.

New Englanders Touring to Florida by Auto.

A party of 50 automobile tourists from the New England States passed through Baltimore last week en route to Miami, Fla., for the purpose of encouraging the building of good highways South of Maryland. The party left Boston on last Wednesday morning at 9 o'clock, and there were 20 automobiles in the group. The last car in the line is a repair car which carries parts for replacement on any car in the party, and two skilled mechanics travel in it. It is planned to arrive in Miami on December 23.

It is the especial purpose of the party of tourists to inaugurate a tour so that Southern people can visit the mountains of New England during the summer months. One of the leaders of the party in speaking of the tour said:

"The purpose of our tour to the South is really to encourage the building of good State highways south of Baltimore. In order to encourage auto owners to make a fight for improved highways I decided upon a plan of conducting a tour for automobile owners going South this winter. Instead of the tourists shipping their cars, I have succeeded in interesting them sufficiently to have them drive their own machines over the route so they can see for themselves the interest in road building in the various sections through which we pass. Maryland roads are surely in high favor with everyone in our party, and we cannot say too much for those responsible for your excellent highways. Coupled with this is the most delightful and charming hospitality which we have received from the citizens of your State."

West Virginia Spends \$2,478,000 for Good Roads.

Charleston, W. Va., December 9—[Special.]—In the 11 months' period ending November 1 more money was spent on the permanent improvement of the roads of West Virginia under the supervision of the West Virginia Road Commission than during any similar period of the State's history. The total amount expended in the period mentioned on permanent roads was \$2,478,000, according to statistics compiled by the State Road Commission, the expenditure representing greater progress than ever before recorded on the hard-surface roads of West Virginia. Of course, when the road-building program under the new \$50,000,000 bond issue is inaugurated the sums alluded to will seem small by comparison.

The funds used in making the improvements came from three sources—the Federal Government, the State of West Virginia and the counties of the State. State-aid expenditures amounted to \$322,591.19. The Federal Government's quota was \$793,871.11. The remainder was paid by the counties. It is estimated that the State government has paid about 45 per cent of the cost of construction of roads this year.

Paving and Bridge Building Program of Baltimore.

One of the biggest paving and street-opening programs ever planned by Baltimore will be fulfilled next year if sewerage extensions and other underground work do not cause delay. The new annex and territory within the old city limits will share about equally in the improvements. The initial program is based upon the public loan improvement of \$26,000,000, which provides \$3,000,000 for streets and bridges in the old city and \$3,500,000 for similar improvements in the new annex.

Approximately 60 per cent of the funds made available for road and street work will be used during 1921 "to open, widen, straighten, close, grade and pave streets, avenues and alleys, and to construct the necessary bridges." The plans for this work are being developed by the City Planning Commission and the Topographical Survey Commission acting jointly with the Commissioners for Opening Streets and the Paving Commission.

"Belt line" boulevards are planned for both the old city and annex; these roads to describe arcs of circles, as near as is possible, and to stop only at the waterfront.

Would Sell Texas State Farm, Now Operated by Convicts, and Put Men to Work on Good-Roads System.

Austin, Tex., December 11—[Special.]—The State of Texas claims the distinction of being the largest farmer in the United States. There is owned by the State and cultivated by convicts of the penitentiary 85,000 acres of land. The principal crops are cotton and sugar-cane. Notwithstanding the favorable condition of convict labor, the farms have paid the State little, if any, profit. Lynch Davidson, lieutenant governor-elect, says that he will urge the Legislature at the regular session which meets in January to dispose of the 85,000 acres of State-owned farms to private interests. He said:

"Texas has suffered an enormous deficit each year from the operation of its 85,000 acres of land by State convicts. I, for one, am heartily opposed to the operation of the State's agricultural lands by the State's unfortunates, because, instead of it being an asset to the State, it has proved a costly liability. Last year the State Penitentiary Commission reported a loss of \$700,000. For the past several years this loss has been between \$400,000 and \$500,000 annually.

"As soon as I am in office I intend to use my efforts to get the State of Texas to sell this 85,000 acres of agricultural lands, which will easily bring \$100 to \$150 per acre. Should this land only sell for \$100 per acre the State would have placed to its credit \$8,500,000 that could be placed out at interest, which would bring revenue in interest alone \$500,000 annually.

"Thus, instead of having a deficit of between \$400,000 and \$700,000 yearly by the operation of these farms, the State of Texas would be considerably richer and would be enabled to have a lower tax rate.

"Instead of working these unfortunates on convict farms at a tremendous loss to the taxpayers and in direct competition with our farmers, I would put them on the public highways of our State and have the best system of public roads of any State in the Union. They could easily be maintained from the interest of the proceeds of the sale of the State's agricultural lands. By placing these unfortunates at work on our public highways it will mean a larger system of good roads in the State at considerably less expense to the taxpayers than is now in force; besides, it will take these unfortunates out of competition with agricultural interests."

Bridge and Roads Near Pensacola Completed.

Pensacola, Fla., December 10—[Special.]—The new Escambia county bridge spanning Bayou Texar and the one-third of a mile of paving skirting the bay shore have both been opened to traffic, after long delays in completion. This gives an excellent highway from the city to the naval station.

The voting of a \$2,000,000 bond issue some weeks ago makes possible the construction of many improved roads. It is believed that this sum will be increased by State and Federal aid, and prospects for increased road building during the new year are bright. Upon the completion of the projects now planned farmers will be greatly aided in bringing their products to Pensacola, where a ready market will be found.

Boosting Lee Highway in Tennessee.

Knoxville, Tenn., December 11—[Special.]—Dr. S. M. Johnson, general director of the Lee Highway Association, is making every effort to get all possible information before the people of this State in order to secure their co-operation in pushing the project to the fullest extent. He is now making addresses in the various cities.

The Lee Highway is to be the southern counterpart of the Lincoln Highway, both of which will start at New York and when completed will terminate in San Francisco. Washington has been selected as the beginning of the improved highway system radiating throughout the country, and a zero milestone has been erected near the White House.

Huntington Has Paved Over 75 Miles of Streets.

Huntington, W. Va., December 11—[Special.]—During the year 1920, \$285,499.26 has been expended in the development of the city's streets and alleys. With the completion of several

unfinished jobs there will be a total of 76.71 miles of improved streets throughout the city. Prior to 1912 the city had a total of 31.18 miles of paving, and since that time 45.53 miles have been added at a cost of \$1,442,774.82.

In addition to the street and alley paving, it is estimated that there are 150 miles of improved sidewalks, and about 75 miles of sewers.

Form Good Roads Organization to Help Business.

Moyock, N. C., December 11—[Special.]—The Currituck County Highway Association has been organized here to aid in the movement for a highway system to connect all the county-seats. The officers of the new organization are: R. O. Bagley, president; W. M. Payner, vice-president, and W. W. Smith, secretary-treasurer.

It is hoped that highways can be constructed that will connect the extreme eastern counties with all sections of the State. Practically all of the business from the counties in the northeastern part of the State goes to Virginia, when it could well be diverted through building of good roads and keep the business within the State.

Kentucky County Roads Placed in Good Condition.

Owensboro, Ky., December 10—[Special.]—County roads in this vicinity are in excellent condition for winter. The splendid weather permitted continuation of work much longer than usual, and most of the projects were finished, being carried on with State and county aid.

Every effort will be made to complete the roads which were contracted for under the old \$600,000 bond issue during 1921. A total of nearly 25 miles of road are yet to be accepted.

\$500,000 Company to Build Cotton Mill.

Ken-Tex Cotton Manufacturing Co. has been formed at Kenedy, Tex., by merchants, bankers, farmers and others associated with the Commercial Club of Kenedy for the purpose of building a cotton mill. The capitalization is \$500,000 and the officers are: Robert Burns, president; G. D. Russell, vice-president; C. A. Carothers, secretary-treasurer.

Textile Mill Notes.

The United Hosiery Mills Corporation of Chattanooga, Tenn., have consolidated three textile mills which have been operated heretofore under their control, one of the mills being located in Chattanooga, one in Birmingham and one in Atlanta. The combined capacity of the three plants is 2500 dozen pairs of hose daily. This brings the number of mills owned by the United company up to six.

An increase of capitalization from \$100,000 to \$200,000 has been announced for the Brazos Valley Cotton Mills of West, Tex. The company contemplates no present changes in the mill. The plant has an equipment of 6240 spindles and 208 looms. T. A. Ferris is president; W. R. Glasgow, vice-president; W. L. Steele, secretary, and J. G. Mixson, treasurer.

The capital of the Whitney Manufacturing Co., cotton manufacturers of Whitney, S. C., will be increased from \$350,000 to \$1,050,000. The president of the company is W. E. Winchester, and W. M. Moore is secretary and treasurer. The company's product is shirtings and sheetings, and the plant has 850 narrow looms and 30,652 ring spindles.

Personal Mention.

For his work in connection with disposing of surplus war materials valued at hundreds of millions of dollars, Ernest C. Morse, Director of Sales, War Department, has been awarded the Distinguished Service Medal. The award was made to Mr. Morse and the medal presented him by Secretary Baker in the latter's office in Washington on December 7. Mr. Morse will retire from the service on December 31.

During his term of office, supplies valued at more than \$1,750,000,000 were disposed of.

RAILROADS

BUSY TIMES IN KENTUCKY COAL FIELDS.

Railroads Packed With Traffic and Plans for Double-Tracking in View.

Louisville, Ky., December 11—[Special.]—Plans for double-tracking the Louisville & Nashville Railroad lines between Louisville and the Appalachian coal field section, in Southeastern Kentucky, and between Cincinnati and the same section, are reported to be receiving serious consideration from directors of the company. It is said that work will be started within the next two years.

This report follows the announcement in Louisville last week by W. L. Mapother, first vice-president of the system, that of a total of \$33,000,000 to be expended, \$11,000,000 is to be employed to improve coal transportation. He also said that 2000 steel coal cars costing \$5,000,000 have been ordered.

"You have never seen congestion," a railroad official remarked the other day, "unless you have been in Southeastern Kentucky around Harlan, Hazard, Lynch, Jenkins, McRoberts and such towns."

As Vice-President Mapother pointed out, this congestion is largely due to the immense increase in coal production. "In the Eastern Kentucky field in 1918," he says, "the production was 450 cars a day. At present it is 1000 cars, and the railroad is asked to handle this new total with the same equipment that was used in 1918."

Pressure from manufacturers and jobbers in Louisville, Cincinnati and other centers for improved shipping facilities into this marvelously developing section is said to be largely responsible for the extensive improvement plans of the Louisville & Nashville and other railroads in the mountain regions. However, the provision of ample freight-handling facilities is the immediate goal, and the railroads are not just now encouraging any moves for extending passenger facilities, although it is being demanded.

Turning down an appeal of the Louisville Board of Trade for two more passenger trains down the Big Sandy Valley from Ashland to Elkhorn City recently, F. W. Whitaker of Richmond, Va., vice-president of the Chesapeake & Ohio lines in charge of traffic, declared:

"Our Big Sandy division is loaded with traffic to the limit. The establishment of additional passenger service would only be to the detriment of the freight traffic, and I am sure the Louisville Board of Trade and our other patrons would not ask or want this."

"We must first move the freight, especially coal, which is so badly needed," says J. M. Parrish, general manager of the Chesapeake & Ohio system, commenting on the Louisville Board of Trade's appeal for more extensive passenger service.

"We are contemplating expending about \$2,000,000 on the Big Sandy division during the next 12 months," he went on to say, "and we hope this will enable us to take better care of the business being offered. However, until these improvements are completed additional passenger service on this branch is impossible."

The great growth in population in this coal-mining section has contributed largely to the present inadequacy of transportation service in the mountains. For example, Harlan county has tripled its population since 1910, while Perry and Letcher counties have more than doubled their populations, and several other counties have made increases of more than 50 per cent. Places such as Hazard, Harlan, Lynch and Pineville, which either did not exist or were villages 10 years ago, have since become thriving little cities.

As a consequence, there is a feverish desire on the part of the railroads, the shippers and the inhabitants of this section for much better communication with the nearer large market centers, and an immense amount of railroad extension work there during the next decade is a certainty.

A 25-Mile Railroad Built in North Carolina.

President John C. Arbogast of the Carolina & Georgia Railway Co., Asheville, N. C., writes the MANUFACTURERS RECORD:

"We have completed our railroad from Andrews, Cherokee county, where it connects with the Southern Railway, to Hayesville, the county-seat of Clay county, North Carolina, a distance of 25 miles, and while we have not established a regular schedule, we are hauling some freight both ways. We are ballasting and surfacing the road, and expect to complete this by March 1, 1921, at which time we will place the road in operation on a regular schedule for both passengers and freight."

"This railroad opens up the country lying on the headwaters of the Hiwassee River north of the Blue Ridge, an area of about 700 square miles, 75 per cent of which territory has virgin hardwood timber and the balance of the territory is one of the finest farming sections in the State of North Carolina."

"The territory referred to includes a portion of Cherokee county and all of Clay county, North Carolina; all of Towns county, Georgia, and a large part of Union and Fanning counties, Georgia, all lying north of the Blue Ridge."

Mr. Arbogast is general manager as well as president of this new road, the other officers being vice-president, Leicester Chapman; treasurer, S. F. Chapman; assistant treasurer and assistant secretary, R. B. Horsburgh; secretary, F. J. Heazel.

Transfer of a Street Railway.

Bluefield, W. Va., December 6—[Special.]—The deal for the transfer of the street-car system of Bluefield from the Appalachian Power Co. to the Princeton Power Co., engineered by the Bluefield Chamber of Commerce, was consummated December 1, when the new owners assumed control of the traction system, which links Bluefield, Princeton and Graham, the last-named community being in Virginia.

The company has ordered much new equipment, which it expects to be able to put in commission soon after January 1. Meanwhile, the traction system will be thoroughly reorganized and every effort made to provide for efficient operation. It will be impossible during the winter to make many improvements to trackage, but as soon as weather conditions permit the company will endeavor to improve the roadbed.

The purchase of the street-car system of Bluefield will give the Princeton Power Co. 15 miles of line. It is probable an office of this company will be established in Bluefield.

Railroad Action to Aid Farming.

Co-operating with county farm bureaus and the agricultural agents in educational campaigns to induce farmers to use lime and fertilizer more freely, the commercial development department of the Baltimore & Ohio Railroad Co. has arranged to lease land to farmers for the storage of agricultural lime. Leases will be at a nominal rental on small tracts of land adjacent to the railroad's team tracks or other sidings at various stations. Thus farmers may obtain lime without paying demurrage charges on cars when unable to haul the lime away immediately upon delivery. Particulars may be obtained from any of the company's industrial agents or from H. O. Hartzell, manager of the commercial development department at Baltimore. In this connection it is interesting to note that the State of Pennsylvania recently issued a bulletin relating to the lime requirements of soils in that State.

Two Presidents Elected.

John W. Green has been elected president of the Knoxville, Sevierville & Eastern Railway, according to a report from Knoxville, Tenn., and succeeds Wm. J. Oliver, who, it is stated, resigned on account of the condition of his health, although he retains his stock in the company. S. E. Cleage was elected a director and will also act as general manager.

A report from Fort Worth, Tex., says that Frank Ketch of Ardmore, Okla., administrator of the Jake L. Hamon estate, has been elected president of the Wichita Falls, Ranger & Fort Worth Railroad to fill the vacancy caused by Mr. Hamon's death, and that J. H. Frazer will succeed Mr. Ketch as vice-president of the line. It is intended to carry out the improvements and extensions planned by Mr. Hamon.

New Equipment, Rails, Etc.

Missouri Pacific Railway is reported to have placed part of its locomotive order with the American Locomotive Co. as follows: 15 six-wheeled switching engines, 5 Pacific type locomotives and 5 mountain type. The company also proposes to purchase 25 Mikado type locomotives.

Princeton Power Co. has received 3 new cars for the street railway at Bluefield, Va.

Gulf Coast Lines have sent 25 cars for rebuilding to the car department of the Southern Dry Dock & Shipbuilding Co., Orange, Texas.

Pennsylvania Railroad, says a report from Pittsburgh, will probably order 150,000 tons of rails, the Pittsburgh & Lake Erie Railway 15,000 tons and the Pittsburgh & West Virginia Railway 3000 tons.

Western Maryland Railway has placed orders for 40 heavy consolidation type locomotives.

United States War Department is offering for sale at \$25,000 each 44 decapod locomotives, which are part of the lot that were built for the Imperial Russian Government. They have been altered from the Russian gauge to standard gauge. They are simple engines with cylinders 25x28 inches, drivers 32 inches diameter, work in steam pressure 180 pounds per square inch, and the wheelbase of engine and tender together is about 60 feet 1 inch. Some time ago 100 similar engines were sold by the Government to different American railroads, including the Atlantic Coast Line, Seaboard Air Line, Western Maryland Railway, St. Louis-San Francisco Railroad and other Southern lines.

Fort Smith & Western Railway has arranged with the Government authorities to purchase some new equipment.

Southern Railway has applied to the Interstate Commerce Commission for authority to issue \$5,900,000 of 4 per cent general mortgage development bonds due April 1, 1956, for the purpose of pledging them as security for a Government loan of \$3,825,000 to purchase new equipment.

Railroad Financing.

Approval of railroad financing has been given by the Interstate Commerce Commission as follows:

Fort Smith & Western Railway to issue \$156,000 of 6 per cent five-year receiver's certificates to be pledged as security for a Government loan.

Trans-Mississippi Terminal Railroad Co. to negotiate a loan of \$1,000,000 to aid in meeting payment on \$2,653,000 of 6 per cent notes.

Texas & Pacific Railway and Missouri Pacific Railway to assume obligations of the Mississippi Terminal Railroad Co. for \$3,653,000.

Chicago, Rock Island & Pacific Railway to pledge \$1,000,000 of first and refunding mortgage bonds as security for notes to be issued.

Applications to issue securities have been made as follows:

Central of Georgia Railway, \$60,000,000 of refunding and general mortgage bonds, \$11,000,000 being to reimburse the company's treasury for additions and betterments, \$31,462,300 to refund that amount of older bonds, and \$17,537,700 for the purchase of equipment, bonds to be dated April 1, 1919, and to run 40 years.

Virginia Southern Railroad, to issue \$150,000 of 6 per cent 10-year first-mortgage bonds.

Western Maryland Railway has applied to the Maryland Public Service Commission for approval of an issue of \$225,000 of 6 per cent notes for marine equipment. The company is having built by the Bethlehem Shipbuilding Corporation at Elizabeth, N. J., a steel car float of 26 cars capacity for use in Baltimore harbor. All of the notes are to mature within nine months.

Richmond Terminal Railway Co. has applied to the Interstate Commerce Commission for authority to issue \$3,100,000 of notes.

A report from Washington says that the application of the Gulf Ports Terminal Railway Co. and the Pensacola, Mobile & New Orleans Railway Co. for a Government loan of \$200,000 was denied.

Line to Atlanta Shortened.

The Southern Railway Co. says that 11 miles were cut from the distance between Washington and Atlanta in the reconstruction and double-tracking of its line, many curves being taken out, and, beginning January 1, 1921, fares will be reduced corresponding to the decreased distance, the saving on a through ticket being 39 cents. The distance is 637½ miles, as compared with 648½ miles before the improvements were made. Intermediate points also have some proportionately reduced fares. To determine the new distance with absolute accuracy the entire line was remeasured, the surveying party walking the entire distance from Washington to Atlanta. This consumed several months, and with the work of preparing the new tariffs it was impossible to get the new rates into effect at an earlier date.

Two Small Lines May Be Abandoned.

The Interstate Commerce Commission, according to a report from Washington, has authorized the Eastern Texas Railroad Co. to abandon its 30-mile line from Lufkin to Kennard, Tex., but it is required that the company shall offer its property for sale, free of encumbrances, for not less than \$50,000 to anyone interested in the communities served by the railroad upon the condition that it shall continue to be operated.

The Commission also authorized the Gulf, Mobile & Northern Railroad Co. to abandon its Ellisville branch in Jones county, Mississippi.

Weekly Car Report.

The Car Service Division of the American Railway Association authorizes the following: The number of cars loaded with revenue freight on railroads in the United States during the week ended November 20 was 880,928, or 26,000 more than were loaded during the corresponding week of 1919, and 23,000 more than during the corresponding week of 1918. The number of cars loaded, however, was 39,000 less than during the preceding week. A reduction in the amount of traffic is seasonable for November and December.

Elected President.

W. J. Harahan was elected president of the Chesapeake & Ohio Railway Co. last week to fill the vacancy caused by the recent death of George W. Stevens. Mr. Harahan, who is a railroad man of wide experience, was formerly president of the Seaboard Air Line, and since then he has been an officer of the United States Railroad Administration. Mr. Harahan was also elected president of the Hocking Valley Railway, which is closely related to the Chesapeake & Ohio.

Joint Information Bureau.

A report from Richmond, Va., says that a committee will be appointed by the Richmond, Fredericksburg & Potomac Railroad, Norfolk & Western Railway, Atlantic Coast Line, Carolina, Clinchfield & Ohio Railway, and the Chesapeake & Ohio Railway to arrange for the establishment of a joint bureau of information, with headquarters in Richmond.

Double Track May Be Built.

Surveys are being made and data gathered by the Southern Railway, according to a report from Asheville, N. C., looking to the construction of second track on its line from Asheville to Morristown, Tenn. This improvement, it is further stated, has been more or less under consideration for several years and might have been made before excepting for the war.

Incline to Be Constructed.

The Nashville, Chattanooga & St. Louis Railway, says a report from Gadsden, Ala., has completed a survey for a new incline on the Tennessee River, near Guntersville, Ala. This incline is planned so that the company's transfer boats can obtain deeper water than is to be had at its present landing.

Commendations, Kicks and Comments

The Vast Majority of the American People Proved on November 2 That They Do Not Hold the Opinions Here Expressed by Mr. Houston—In Regard to the Federal Reserve Board We Suggest Mr. Houston Read Senator Owen's Recent Statements About the Federal Reserve Board.

William K. Stamets,
High-Grade Machine Tools,
Jenkins Arcade Building, Pittsburgh, Pa.
Cleveland Office, Hickox Building.

December 4, 1920.

Manufacturers Record Publishing Co., Baltimore, Md.:

Gentlemen—Your letter of December 1 soliciting advertising has just been received. We beg to advise that we are not in sympathy with the editorial policy of the MANUFACTURERS RECORD. Your tract entitled "Go Forward" was recently received at this office; and I think is likely to mislead in some respects.

You resurrect the old tariff issue, which for years was made use of by political parties for the sidetracking of more vital questions, which more vital questions may not have been as convenient for use as political issues. You take an extreme attitude toward the League of Nations (as though France or Great Britain had any fear of or intention of surrendering one iota of their national sovereignty by the accomplished fact of their having entered the League of Nations, and as though the United States would be in any different position than the other members), which attitude was taken during the campaign by many in order to beat the Wilson and Cox crowd, but which attitude is not representative of the majority of AMERICANS; and finally you give utterance to the astonishing statement reading as follows: "Notwithstanding the fact that the work of the Federal Reserve Board has temporarily halted business very seriously, with the change in Administration we may safely count upon better things in finance, and more construction and less destruction, more production of things needed and less production of bankruptcies. The work of the Reserve Board during the last twelve months, we say advisedly, will, before it is overcome, cost this country nearly as much as the World War." We admit that all of these questions are debatable at great length, but we cannot swallow your absurd statement regarding the Federal Reserve System.

Do you happen to know that the ratio of reserves of our national banking system last summer fell below the ratio of the Bank of England when the ratio of the United States reserves was calculated on the same basis as the English ratio, a country in which inflation otherwise has proceeded further than in the United States? In the opinion of a very great majority of those charged with responsibility in business management, the action of the Federal Reserve Board can only be criticized in that it did not begin soon enough. One editor recently remarked in my hearing, in the course of a long trip this editor was making, that this favorable opinion was held by 95 per cent of business men in the United States.

Certainly the brakes are being put on as gradually and as smoothly as could possibly be conceived. Wall Street speculation has been greatly reduced (dividing the present volume of New York call loans by the ratio of money depreciation and comparing them with the loans of the period before the war).

You can rest assured that under a Republican Administration the Federal Reserve System will be run along the same lines as heretofore. The Republican party originated the Reserve System scheme, you will recollect.

In your tract you fail to touch on the true nature of the farmers' and the South's problem, which, however, certain interests in the South understand and are taking up. While there are a number of farmers' problems, including the problem of land values and the problem of farm labor; one of the problems is that of a better system of marketing farm products so as to obtain a larger proportion of the prices paid by the consuming public. Additional financing alone will not help. Certain other elements must be provided. In the present situation I believe it substantially true that in general the longer wheat and some other products (probably including cotton) are withheld from the market the lower the net return which the farmer will realize for this crop, also the next crop.

We have always thought that the MANUFACTURERS RECORD had a large field for constructive work. As the writer personally takes a great deal of interest in the South, having spent some 20 years of his life largely at work in the South, he is interested in such propaganda as you are carrying on. It is one of the evils of publicity today that so much of it is biased, and very often for some ulterior purpose, such as promoting the immediate aims of a single group or region, not calculated to do good through spreading fundamental knowledge, such as would be generally helpful in solving problems through education of the public to a more nearly correct point of view.

Yours very truly,

H. M. HOUSTON.

FOREIGN NEEDS

[The MANUFACTURERS RECORD receives many letters from abroad asking for information about American goods, and others, from men who wish to represent American houses. Without assuming any responsibility for these concerns, we publish a summary of the foreign letters of inquiry from week to week.]

General Merchandise.

J. FREDERICK CAMERON, Cuarteles 4, Havana, Cuba.—I am interested in representing American manufacturers in Cuba and the whole West Indies. I am acquainted with all the reputable traders and buyers of these parts. List of the articles which I am desirous of representing: Shirts, collars, ties, underwear, hosiery for ladies, gentlemen and children; hats, caps, boots, shoes, silks, ribbons, textiles of all kinds, office and household furniture, typewriters, typewriter ribbons, carbon paper, shears, toys, jewelry, safety and other razors, cotton goods of all kinds, dress fabrics of all kinds, perfumery, soaps, powders, creams, laundry soaps, motor-car sundries, enamelware, glassware, hardware, building cement, clocks, watches, cutlery, spoons, forks, sewing machines, dyes, trunks, suit cases and bags, boot and shoe polishes and creams, biscuits, confectionery, jams, patent medicines, canned goods, sardines, fresh herring, canned milk, cheese, butter, rice, flour, pork, beef, codfish, lard, cottonseed oil, potatoes and provisions in general.

Printing and Lithographing Machinery—Silk and Silk Dresses.

NARIMON T. D. ANKLESARIA & Co., Post Box No. 370, Parsi Bazar Street, Fort, Bombay, India.—We are greatly interested in printing and lithographing machinery, silk pieces and ready-made silk dresses, especially for the ladies. We would like to go for the cut pieces and mill ends in silk also. In machinery we require the treadles; that is, the inside measurement must be around 5x8 to 13x18 cutting machines from 24 inches to 36 inches, stitching machines and perforating machines. In ready-made silk dresses we need the blouses and waists, camisoles and undershirts, night gowns and kimonos, and children's dresses. It would be better if we can get in touch with the parties dealing in cut pieces and mill ends in silk so that we may get the same on weight system.

Piece Goods—Machinery.

B. R. BHALLA & Co., Amritsar, India.—Import—We are specially interested in importation of piece goods and sundries from America, and if any manufacturers or shippers want to give us sole agency, we shall be very glad to work for them on a commission. Export—We want a commission agent in America who may work for us there and secure orders for us on copak, which we want to export from this side. Machinery—We want a sole agency for any firm of America in Punjab to work for them as their agents for sewing machines, knitting machines and envelope-making machinery. Full detail with price list on D/P basis and discount and commission desired.

General Merchandise.

H. S. KHANNA & Co., P. O. Box 711, Calcutta, India.—We desire to make definite connections for handling American products in general. We are one of the largest importers of general merchandise, dealing in almost every line that America exports into India, such as silk, cotton, woolen goods, piece goods, yarns, general sundries, embroidery, laces, drawn work, hosiery, chemicals, dyes, hardware, metals, cutlery, velvets, gold and silver thread and laces, watches, toys, glassware, grassware, etc., and shall be glad to receive samples and deal in all these lines on commission.

Silk and Cotton Goods, Perfumes, Etc.

SOCIEDAD ANONIMA PUMAREDA, Barcelona, Spain.—The articles in which we are interested are: silk articles in general; plain cotton articles and stamped (calicos); perfumes, toilet as well as boudoir articles. We desire a list of manufacturers dealing in these lines who are not represented in Spain at this time so that we may solicit their representation. Correspondence in Spanish suggested.

Paraffine, Tallow, Oils, Etc.

JULES BESSIS, 71, Cours Pierre Puget, Marseilles, France.—I shall be happy to get in touch with firms in the United States making and exporting paraffines, tallow, industrial oils and, in general, all kinds of grease. I am an agent at Marseilles and have a great many business connections and clients. Correspondence in French suggested.

Saws and Lathes.

MEHR DIN, CHIRAGH DIN, TURNER, Post Office Nowkha, Brandreth Road, Lahore, India.—We are desirous to communicate with different manufacturers of your country, because we wish to purchase certain saws and lathes for sawing timber and iron. Will you kindly let us have the names and addresses of such manufacturers?

MECHANICAL

Dredging Through Rock on Tennessee River.

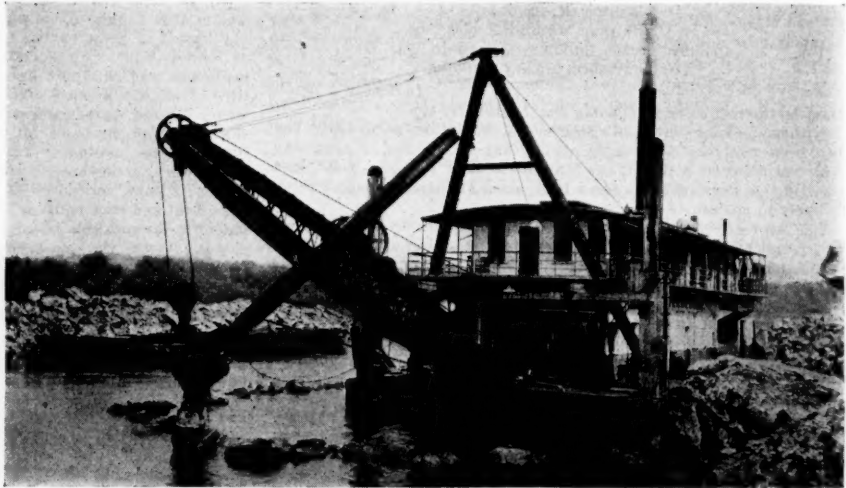
Improvement of the Tennessee River near Florence, Ala., by the Government includes some very interesting work, especially at Tuscumbar Bar and Rogers Island Bar. This improvement comprises the excavation of a channel 150 feet wide and 5 feet deep through these bars to permit navigation. The aggregate length of the two channels is about five miles, and their construction involved the removal of approximately 500,000 cubic yards of blue flint rock at a unit cost of \$2.

It was all under-water excavation, the plant used being three drill units (floats), each mounting 12 steam drills; two powerful dipper dredges, with attendant plant (dump scows and barges), and three derrick boats, each equipped with a three-sided Hayward bucket, called "orange-peel" buckets because of their peculiar shape. It was necessary to thoroughly blast up the channel area before any part of it could be removed by the dredges. The orange-peel buckets were invaluable, it is stated, to the work for picking up constantly accumulating coaming pushed up by the dredges and for removing large rocks which the dredges were unable to lift. Rocks of six cubic yards contents were frequently taken out by these buckets.

The accompanying pictures afford an idea of the rugged nature of this work. One illustration shows a dredge operating near the

upper end of the improvement and on the second cut, the first cut having been carried ahead by another dredge. This illustration also shows how the coaming accumulates by being pushed forward, and also from the overflow of the dipper. The other picture shows a large rock, more than 2½ times as tall as a man, which had just been picked up from the channel to be placed on the east wall outside of the channel.

The width of each dredge cut was 37½ feet, and four cuts were



DREDGE AT WORK DIPPING OUT BROKEN ROCK.

necessary to cover the entire channel width. Material from the first and the fourth cuts was cast aside, each forming a lateral dyke on the outer side of the channel; material from the two center cuts was removed on scows and barges.

About 20 per cent of the length of this channel was excavated through bar that was dry at low water. It was found necessary to drill three feet below grade to get the requisite depth, as the ledges were very thick. This caused quite a large overcut. On account of interruptions from high water, the work was extended over seven low-water seasons.

Small Fuel Oil Motor.

New Orleans, La., December 6.—[Special].—A small internal-combustion motor, using ordinary fuel oil, has been invented by Peter Johnson of New Orleans. The New Orleans Machine Works has several motors of this type under construction.

The engine is of the semi-Diesel type, and the inventor describes it as follows:

"This engine uses fuel oil instead of gasoline, and in one-half the quantity. No carburetor or magneto is employed, and the spark plug and electric devices are not used except for starting. It is a low-compression engine; still the explosion pressure is about the same as a gasoline engine at full load; therefore, the engine is adaptable for tractors, trucks and automobiles, as well as for stationary and marine work, because low compression and the entire lack of pre-ignition allows of light-weight construction, heretofore impossible in fuel-oil burning engines.

"The efficiency of the engine is due to the method of fuel injection, which is controlled by a single concentric eccentric cam, attached to the pump, which raises the spiral nozzle and at the same time admits a small amount of compressed air, which forces the charge of oil, already measured out by the pump, into the combustion chamber or cylinder in a finely-atomized spray. This operation gives the charge of fuel the desired velocity and turbulence for perfect combustion. After leaving the pump, the fuel is preheated, thus eliminating refrigerating effect and misfiring at any speed. The fuel oil is fed in gradually during 14° of crank angle somewhat before the end of piston stroke. The amount of air admitted is small and a single stage is used. There is no sharp rise in pressure, and high-piston speed is easily obtainable. The pump will run up to 1200 strokes a minute. The 'pick-up' in a single-cylinder engine is almost like that of a multiple, nearly instantaneous."



LIFTING HUGE ROCK FROM THE RIVER.

Construction Department

EXPLANATORY.

The MANUFACTURERS RECORD seeks to verify and obtain additional information regarding all enterprises reported in its Construction Department, by direct daily correspondence. Further facts of news value are published later from telegraph, mail and representatives' reports. We appreciate having our attention called to errors that may occur.

DAILY BULLETIN.

The Daily Bulletin of the MANUFACTURERS RECORD is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$20.00 per year.

Airplane Plants, Stations, Etc.

La., New Orleans.—Airplanes.—City let contract to Sadler Bros. Construction Co. to erect airplane construction plant.

Bridges, Culverts and Viaducts.

Fla., Green Cove Springs.—Clay County Special Road and Bridge Dist. No. 2 will build bridges; issued \$9500 bonds.

Fla., Jacksonville.—Duval County Comms., Frank Brown, Clk., will extend Yellow Water Creek bridge 60 ft.; bids until Dec. 21. (See Machinery Wanted—Bridge Construction.)

Fla., Jacksonville.—City Comsn. will construct Lee St. viaduct; \$300,000; bids until Jan. 7; F. M. Edwards, City Engr. (See Machinery Wanted—Viaduct Construction.)

Fla., Macclenny.—Baker County Comms., Road and Bridge Dist. will construct bridges; issued \$15,000 bonds.

Ga., Brunswick.—Glynn County Comms. will build two bridges and causeway; Beasley Construction Co., Contr., Savannah, Ga.

Ga., Chatsworth.—Murray County Comms. will build bridge over Rock Creek; contract let; contract for 10,000-yd. approach work to Luton Bridge Co., 59 Stokes Ave., Atlanta; A. A. Simonton, Div. Engr., Rome, Ga. (Lately noted inviting bids.)

Ga., Colquitt.—Miller County Comms., Roads and Revenues, W. C. Dancer, Chrmn., will build reinforced concrete deck girder bridge over Spring Creek on Conquitt-Blakeley road; 137,837.7 lbs. reinforcing steel; 1088 sq. yds. Kentucky rock asphalt paving; bids until Dec. 22. (See Machinery Wanted—Bridge Construction.)

Ga., Lexington.—Oglethorpe County Commissioners will build concrete bridge to replace structure over Moss Creek on Athens-Lexington road, State Route No. 10.

La., Jena.—La Salle Parish Police Jury, S. B. Hodges, Prest., will build 31 steel bridges; concrete abutments or I-beams on creosoted mud sill; 14 to 90 ft. spans, 15-ton capacity; receive new bids Jan. 1; rejected previous bids; James A. McConnell, Engr.

La., Lake Charles.—Calcasieu Parish Police Jury will build bridge across Calcasieu River; concrete; invite bids in spring; Bartlett & Rainey, Engrs., San Antonio, Tex.

La., New Orleans.—Louisville & Nashville R. R., W. H. Courtenay, Ch. Engr., Louisville, Ky.; considering plans for steel and concrete bridges across Chief Menteur and Rigolets; \$4,000,000.

Md., Baltimore.—Board of Awards will repair Chase St. bridge; Chesapeake Iron Works, Contr., Westport, Md. (Previously noted inviting bids.)

Miss., Cleveland.—Bollivar County Supvrs., will build 2 reinforced concrete bridges; bids

until Dec. 28; H. C. Dietzer, State Highway Engr., Jackson, Miss. (See Machinery Wanted—Bridge Construction.)

Miss., Gulfport.—Harrison County Supvrs. will construct approach from Harrison County side of ferry over Bay St. Louis; \$2200; W. W. Hammond, Contr.

Miss., Moss Point.—City will build 2 bridges over Rhodes Bayou; creosoted material; invites bids; sold \$10,000 bonds. Address The Mayor.

Mo., Kansas City.—Board Public Works will build reinforced concrete arch bridge over Blue River at Washington Park Blvd.; \$165,000; Hedrick & Huff, Const. Engrs.; R. W. Waddell, City Engr.

Mo., St. Joseph.—Buchanan County Comms. will build bridges; James Stanton, Contr., Leavenworth, Kans.

N. C., Marion.—McDowell County Comms., H. F. Little, Chrmn. Highway Comsn., will construct bridges and roads; issue \$150,000 bonds.

Okla., Tulsa.—Tulsa County Comms. will build bridge over Snake Creek; concrete and steel; A. Bancroft, Contr.

S. C., Columbia.—Richland County Supvrs., S. H. Owens, Supvr., will build steel bridge on Augusta road.

S. C., Jonesville.—Southern Ry., T. H. Gatlin, Ch. Engr., Washington, D. C., is building bridge.

S. C., York.—York County Comms. will build reinforced concrete bridge of three 25-ft. clear spans over Stoney Fork Creek on Saluda Chester road; F. A. Project No. 103; requiring 26,660 lbs. reinforcing steel; W. M. Miller, County Engr., Rock Hill, S. C., receives bids until Dec. 15. (See Machinery Wanted—Bridge Construction.)

Tex., Breckenridge.—Stephens County Comms., J. W. Darden, County Judge, will construct concrete viaduct 229 ft. long over Gonzales Creek; \$69,828.99; Maney Bros. & Co., Contrs., Oklahoma City; Nagle-Witt-Rollins-Quarles Engineering Co., Engr. (Lately noted inviting bids.)

Tex., Cleburne.—Johnson County Comms. will build steel and reinforced concrete bridges on 12 mi. Highway 2A; 146,400 lbs. reinforcing and 115,800 lbs. structural steel, etc.; R. O. Whiteaker, County Engr.

Tex., Fort Worth.—Tarrant County Commissioners, W. E. Yancy, County Auditor, will build 3 highway bridges; bids until Dec. 13; R. V. Glenn, Const. Engr. (See Machinery Wanted—Bridge Construction.)

Tex., Fort Worth.—Tarrant County Comms., W. E. Yancy, Auditor, will build 2 bridges over Trinity River; 2 steel spans, abutments and piers over Trinity River on Project No. 10, known as White Settlement road; 2 steel spans, abutments and piers over Trinity River

on Project No. 6, known as Fort Worth-Lake Worth Dam road; \$42,500; Austin Bros. Bridge Co., Contr., Dallas, Tex.; R. V. Glenn, Const. Engr., Ft. Worth, Tex. (Lately noted inviting bids.)

Tex., Longview.—State Highway Dept., Austin, Tex., plan bridge across Brazos River.

Tex., Montague.—Montague County Comms., W. T. Russell, County Judge, will construct concrete bridges and culverts, etc.; \$220,000 available; Abe Anderson, Contr.; J. Rutledge Hill, County Engr.; both Bowie, Tex.

Va., Portsmouth.—Norfolk County Comsn. Roads and Bridges plan 2 bridges; \$30,000.

Va., Richmond.—Virginia State Highway Comsn. care of G. P. Coleman, Commr., will build highway bridge steel truss over Paul's Creek on Flower Gap road and over Little Reed Island Creek near Southern Store; bids until Jan. 7.

Va., Richmond.—Virginia State Highway Comsn. care of G. P. Coleman, Commr., will build highway bridge over Mattaponi river; W. R. Glidden, Engr., 116 S. 3rd St.

Canning and Packing Plants.

Ky., Henderson.—Eckert Packing Co., capital \$200,000, inceptd. by F. F. Eckert and E. C. Farmer.

Md., Allen.—W. F. Messick & Bros. will rebuild burned canning house and storage warehouse; loss \$50,000.

S. C., Beaufort.—Seacoast Packing Co. let contract to erect 3-story 85x100-ft. packing plant. (Previously noted inceptd., capital \$150,000.)

Clayworking Plants.

Ga., Athens.—Bricks.—Standard Brick Corp., capital \$100,000, inceptd. by Robert C. Wilson, E. H. Dorsey, Jr., J. Audley Morton.

Mo., Farber.—Bricks, etc.—North Missouri Fire Brick Clay Co., capital \$8,000, inceptd. by Benjamin Hill, D. O. Groce, both of Farber; R. N. Nichols, Mexico, Mo.; has installed grinding machinery; daily capacity 1000 tons. (Supersedes previous item.)

Tex., Stamford.—Bricks.—Stamford Brick Works, capital \$75,000, inceptd. by James and J. P. Brewington, W. T. Andrews.

Tex., Vernon.—Chamber of Commerce, Jed Morrow, Carnegie Bldg., is interested in establishing brick and tile plant. Lately noted. (See Machinery Wanted—Brick and Tile Machinery.)

Coal Mines and Coke Ovens.

Ky., Allen.—Virginia Mining Co., Hiram Harris, Prest., increased capital from \$9000 to \$50,000.

Ky., Ashland.—Big Shelby Coal Co., capital \$3000, inceptd. by C. C. and Charles Lusk, Meyer Schofman; will erect coal tipple, 15 miners' houses, etc.

Ky., Paintsville.—Clabron-Elkhorn Coal Co., capital \$120,000, inceptd. by E. M. Clay, E. M. Brown, W. C. Howes.

Ky., Williamsburg.—Mahan-Elhison Coal Corp. (lately noted chartered, capital \$200,000) organized by T. B. Mahan, Prest., Williamsburg; E. C. Mahan, V.-P., Knoxville, Tenn.;

A. M. Ellison, Secy.-Treas. and Mgr., Kitts, Ky.; will begin immediate development; install mchy. (See Machinery Wanted—Mining Machinery.)

Ky., Calvin.—Crech-Duffy Coal Co. will construct coal tippie and 10 miners' houses. (Lately noted under Ky., Pineville, inceptd., capital \$35,000.)

Ky., McDowell.—Elkhorn Gas Coal Mining Co. will erect coal tippie, 12 miners' houses, church, etc.

Ky., Millstone.—Elkhorn Jr. Coal Co. will erect addition to tippie and build 12 additional miners' houses.

Ky., Stone.—Ira Coal Co. will erect coal tippie, church, etc.

Md., Mt. Savage.—Mt. Savage Fuel Co., Clinton Uhl, Treas., will develop 400 acres coal land; present daily output 50 tons, to be increased to 100 tons; has mchy. (Lately noted increased capital to \$50,000.)

Md., Vindex.—Chaffee Run Coal Co., capital \$25,000, inceptd. by Bernard V. Welsh, Westernport, Md., and others; leased 800 acres coal land and probably will develop.

W. Va., Clarksburg.—Stout Coal Co., capital \$50,000, inceptd. by Joseph S. Evans, Alexander and Adam A. Stout.

W. Va., Farrelsburg.—Fowler Branch Coal Co. has leased 70 acres of coal land; will erect tippie and increase output. (Previously noted inceptd., capital \$10,000.)

W. Va., Hughey.—Chilton Eagle Coal Co.; capital \$300,000, inceptd. by S. A. McCallister, Hughey; Geo. D. Miller and R. C. Thurmond, both Huntington, W. Va.

W. Va., Huntington.—Pigeon-Thacker Coal Co., capital \$500,000, inceptd. by G. M. McLaughlin, Walter M. Parker, W. J. Wolfe.

W. Va., Iager.—Vera-Pocahontas Coal Co., capital \$80,000, inceptd. by V. T. Strickler, J. W. Johnson, both Iager; G. G. Kellar, Berwind, W. Va.

W. Va., Itmann.—Pocahontas Fuel Co., Isaac T. Mann, Prest., continues development of 6500 acres coal land; erect steel tippie, machine shop, miners' dwellings, etc.; daily capacity from 3000 to 4000 tons; H. Bert Wright, Ch. Engr.

W. Va., Meadowbrook.—Dale Coal Co. organized with H. C. Fortney, Prest.; E. H. Martin, Secy.; A. W. Martin, Treas.; develop 40 acres coal land; present daily output 150 tons to be increased. (Lately noted inceptd., capital \$150,000.)

W. Va., Morgantown.—Purselove Mining Co. has purchased 342 additional acres of coal land; will develop.

W. Va., Shaw.—Shaw Coal Co., Parsons, W. V., organized with Clarence B. Pifer, Prest.; O. A. Miller, V.-P.; J. P. Scott, Secy.-Treas.; will develop 127 acres coal land; mchy. not determined. (Previously noted inceptd., capital \$50,000.)

W. Va., Wheeling.—Wheeling Quality Coal Co., H. W. Campbell, Secy.; purchase additional plant; will erect tippie, electric hoist, office building and construct road. (Previously noted organized, capital \$25,000.)

Concrete and Cement Plants.

Mo., Marshall.—Asphalt.—Higginsville Asphalt Co., capital \$1,000,000, inceptd. by M. L. Montague, Prest.; H. C. Francisco, Treas.; will develop 500 acres.

Va., Norfolk.—Cementile Roofing.—Cementile Roofing Corp., A. LeB. Ribble, Mgr., 19th and Monticello Ave.; let contract to Griffin Bros. to erect mill-construction building; mfr. roofing tile. (Lately noted reorganized to erect plant.)

Cotton Compresses and Gins.

Ala., Barton.—Lewis Nelson will rebuild burned cotton gin; loss \$3500 to \$4000.

S. C., Dillon.—McLellan Cotton Gin Co. will rebuild cotton gin; loss \$65,000.

Tex., Grandview.—Pitts Gin Co. will rebuild burned plant; loss several thousand dollars.

Tex., Abilene.—W. T. Woody & Clifton will rebuild burned cotton gin; loss \$23,000.

Tenn., St. Joseph.—St. Joseph Gin Co., capital \$2000, inceptd. by W. H. Belew, B. Hallman, John C. Thigpen.

Tex., Ira.—J. P. Sims will rebuild burned cotton gin.

Cottonseed-Oil Mills.

Okla., Wagoner.—Osage Cotton Co. will rebuild burned hullhouse; loss \$80,000.

Tex., Stockdale.—Stockdale Cottonseed Oil Mill Co. will rebuild burned building; loss \$50,000.

Drainage Systems.

Ala., Centerville.—Hay Sap Drainage Dist., Bibb County Comms. will drain 6000 acres; Guy A. Hart, Engr.

Ala., Fayette.—Fayette-Lamar Drainage Dist., County Comms. will drain 22,300 acres; Guy A. Hart, Engr.

Ala., Hamilton.—Winfield Drainage Dist., Marion County Comms. drain 6000 acres; Guy A. Hart, Engr.

Ala., Hamilton.—Bogue and Watson Creek Drainage Dist., Marion County Comms. will drain 6000 acres; Guy A. Hart, Engr.

Ala., Haynesville.—Swamp Drainage Dist., Lowndes County Comms. will drain 25,000 acres; Guy A. Hart, Engr.

Ala., Mobile.—Fowl River Drainage Dist., Mobile County Comms. will drain 3500 acres; Guy A. Hart, Engr.

Ala., Scottsboro.—Santa Creek Drainage Dist., Jackson County Comms. will drain 6000 acres and two small districts, totalling 2500 acres; Guy A. Hart, Engr.

Ga., Cumming.—Big Creek Drainage Dist., No. 1, Forsyth and Milton County Comms., S. H. Allen, Secy.-Treas.; construct drainage system; issued \$16,064 bonds.

Ga., Hartwell.—Shoal Creek Drainage Dist., Comms., Hart County, will construct drainage system; issued \$25,000 bonds.

Ky., Henderson.—Diamond Island Bend Drainage Dist. let contract to Carpenter & Carpenter, Lynn, Ind., to construct 41,222 ft. tile drainage ditch. (Bids lately noted.)

La., Jennings.—Thornwell Drainage Dist., Comms., Jefferson Davis, Parish, will construct drainage system; issued \$15,000 bonds.

Tenn., Somerville.—Gray's Creek Drainage Dist., Fayette and Shelby County Comms., will construct main canal and laterals, total excavation 272,300 cu. yds.; bids until Dec. 29. (See Machinery Wanted—Drainage System.)

Tex., Cleburne.—City will drain Buffalo Creek in city limits. Address The Mayor.

Tex., Houston.—Harris County Drainage Dist. No. 8 Chester H. Bryan, Judge, will construct drainage improvements; 700,000 cu. yds. excavation; bids until Jan. 3. Lately noted. (See Machinery Wanted—Drainage System.)

Electric Plants.

Fla., Boynton.—City voted \$10,000 bonds to improve electric-light plant and ocean front. Address The Mayor.

Ga., Manchester.—City will construct electric light plant, etc.; voted \$50,000 bonds. Address The Mayor.

Ky., Carrollton.—City, J. R. Guillon, Mayor, will improve electric light and water-works plant; bids about Dec. 20; bonds voted.

Miss., Meridian.—City will vote Jan. 11 on amendment to charter providing for building, equipping and operation of electric-light and gas plants. Address The Mayor.

N. C., Greenville.—City issued \$65,000 bonds for electric-light and water systems. Address The Mayor.

Okla., Nowata.—Gunther City Coke & Coal Mining Co. is interested in establishing electric-light plant; C. B. Circles, Purchasing Agent.

S. C., Summerville.—J. F. Prettiman & Sons have let contract to H. K. Ferguson Co., Vickers Bldg., Cleveland, O., to construct 32x68-ft. power-house.

Tex., Bonham.—City contemplates purchase of light and power plant.

Tex., Snyder.—Snyder Utilities Co. will improve light and ice plants; increase capacity.

Tex., Sweetwater.—City Comsn. will erect electric-light plant; contemplates bond issue.

Va., Portsmouth.—City, Mgr. J. P. Jervey, contemplates installing electric-power plant; W. L. Davis, Mechanical Engr.

Va., Radford.—Norfolk and Western Ry., J. E. Crawford, Engr., Roanoke, Va., will erect 60x90 ft. power plant, install signal system; has site.

W. Va., Clarksburg.—Monongahela Valley Traction Co. will construct sub-station, extending high-tension lines from Hutchinson to Clarksburg; carrying 66,000 volts.

W. Va., Grafton.—City, Mayor Cather, will expend \$12,000 to remodel street-lighting plant; S. T. Scanlon, Engr.

W. Va., Martinsburg.—Potomac Light & Power Co.; will rebuild burned switchboard; loss between \$15,000 and \$20,000.

Flour, Feed and Meal Mills.

Ky., New Concord.—New Concord Milling Co., capital \$7200, inceptd. by Mrs. Anna Smith and Taylor Smith.

Md., Sykesville.—Sykesville Milling Co., Wade H. D. Warfield, Prest., will rebuild burned grain elevator, etc.; loss \$160,000.

Tex., Clarendon.—Texas Grain Products Co., Dallas, Tex., E. F. Ballard in charge, will install 100-ton-capacity feed-crushing mill.

Foundry and Machine Plants.

Ala., Birmingham.—Armature.—Walstrum Armature Works will increase capital from \$10,000 to \$25,000.

Ala., Birmingham.—Machine Shop, etc.—Continental Gin Co., 3330 Tenth Ave., let contract to H. K. Ferguson Co., 6523 Euclid Ave., Cleveland, O., to erect 1 story 132x400 ft. foundry and 1 story 100x300 ft. machine shop.

Ky., Paintsville.—Boilers.—Paintsville Boiler & Machine Shop, capital \$20,000, inceptd. by B. F. Andre and T. M. Jones, both of Ashland, Ky.

La., Shreveport.—Machine Shop.—Morris Baron will erect \$5000 machine shop.

Md., Baltimore.—Safes.—Miller Safe Co., Edward L. Kestler, Supt., Catherine St. and Wilkens Ave., will begin construction of second unit of plant. (Previously noted to construct plant of four units.)

Tex., Dallas.—Machinery.—Dallas Machine & Tool Co., 2318 Live Oak St., organized with A. E. Kerr, Prest.-Mgr.; V. C. Westfield, V.-P.; R. Kerr, Secy.-Treas. (Lately noted inceptd., capital \$500,000.)

Tex., El Paso.—Stoves.—J. M. C. Clanahan, care of Chamber of Commerce, is interested in establishing stove plant.

Tex., Fort Worth—Iron and Steel Bars.—George W. Armstrong & Co. will increase capital from \$650,000 to \$1,000,000.

Tex., Houston—Radiator.—South Texas Radiator Works, capital \$350,000, inceptd. by E. A. Perkins, C. W. and T. M. Gribble.

W. Va., Kenova—Steel—United Steel Erecting Co., capital \$500,000, inceptd. by Chas. Thacker, W. T. Lavins, both Kenova; T. W. Adkins, Cattlesburg, Ky.

W. Va., Kimball—Machine Supplies.—McDowell County Mill & Mine Supply Co., capital \$100,000, inceptd. by H. W. Early, Carroll H. Morgan, both Kimball; A. C. Hufford, Welch, W. Va.

W. Va., Morgantown.—Mine Cars, etc.—B. M. Chaplin & Co. purchased 6-acre site, will establish mine car mfg., and woodworking plants, also machine shop.

Gas and Oil Enterprises.

Ark., Pine Bluff.—National Oil & Gas Co., capital \$100,000, inceptd. by J. H. Garrett, H. W. Savage, J. M. Gill.

Ga., Columbus.—Woco Oil Co., W. H. Berry, Mgr., will enlarge storage plant and erect two additional tanks.

La., Lafayette—Oil Refinery, etc.—Delart Refining Co. of Lafayette and Anse La Butte, La., will establish oil refinery and operate pipe lines; buildings include office-laboratory 16x16 ft., wood, cost \$400; receiving-house 16x16 ft., wood covered with galvanized iron, 2 stories, cost \$350; warehouse 20x40 ft., wood with galvanized iron, cost \$400; pumphouse 16x16 feet, wood, cost \$200; daily running capacity, 100 to 150 bbls. crude oil; cost of refinery, \$38,500; pipe lines of 1/2 to 8-inch pipe, costing \$5000; longest line is 400 ft. of 3-in. pipe to field loading rack; John A. Coleman, Supt. and Archt.; mchy contracts let to Tulsa Sheet Iron & Boiler Works, Oklahoma City; William P. Copping, New Orleans, La.; pipe contract to F. W. Heitman Co. and Peden Iron & Steel Co., both of Houston, Tex. (Lately noted increasing capital from \$50,000 to \$150,000.)

La., New Orleans.—Texiana Oil & Refining Co. inceptd. with capital of \$200,000.

La., St. Charles Parish—Oil Export Plant.—Carson Petroleum Co. of Louisiana, capital \$5,000,000, organized with Edward B. Carson, Prest.; C. W. Carson, V.-P. and Gen. Mgr.; Chas. Ephgrave, Secy.; Thos. D. Huff, Gen. Counsellor, 29 S. La Salle St.; all of Chicago; will establish oil export plant in St. Charles Parish, 16 mi. above New Orleans, to include can, casing and coopeage works and tank farm; daily output 20,000 5-gal. cans, 5000 cases and 5000 bbls.; provide sufficient tankage to accumulate various grades of oil from Oklahoma; contemplates docking facilities to cost \$180,000; install complete conveyor system to handle material from cars and cargoes from plant into hold of ship; initial investment \$1,000,000.

Miss., Meridian.—City will vote Jan. 11 on amendment to charter providing for building, equipping and operation of gas and electric-light plants. Address The Mayor.

Okla., Cushing.—Home Pipe Line Co. will increase capital from \$25,000 to \$50,000.

Okla., Enid.—Perry-McGraw Oil Co. capital \$25,000, inceptd. by Jesse and Julia Perry, M. J. McGraw.

Okla., Enid.—Oil State Distributing Co., capital \$50,000, inceptd. by R. C. and H. A. Vance, G. D. Roseman.

Okla., Guthrie.—Sunset Petroleum Corp., capital \$300,000, chartered by John H. Maginn, W. E. Furrow, G. H. Waddy.

Okla., Holdenville.—Holdenville Gas Co. will install 4-in. gas lines to double plant's capacity.

Okla., Oklahoma City.—Old Colony Petroleum

Co. will increase capital from \$300,000 to \$1,500,000.

Okla., Tulsa.—Petco Petroleum Corp., capital \$100,000, chartered by J. Burke, J. A. Hill; both Tulsa; G. Costello, Dincan, Okla.

Okla., Okmulgee.—Cooper Petroleum Co. will increase capital from \$50,000 to \$300,000.

Okla., Tulsa.—Burr Oak Oil Co. will increase capital from \$10,000 to \$80,000.

Tex., Breckenridge.—Syndicate Petroleum Co., J. R. Miller, Secy-Treas., Stephenville, Tex., has consolidated interest of Barclay Petroleum Corp., 35 Wall St., New York, and absorbed holdings of Stephenville-Desdemona Oil Co.; plans for immediate drilling of two wells in Stephen County.

Tex., Cisco.—Pure Oil Co., capital \$2000, inceptd. by W. E. Morris, A. F. Sonberg, J. J. Butts.

Tex., Galveston.—Brooks Petroleum Co. of Houston will erect two tanks; \$100,000 to be expended for site.

Tex., Liberty.—Whaley Cove Co. (lately noted inceptd., capital \$100,000) organized with T. T. Baggett, Prest.; A. H. Waldman, Secy-Treas.; both Batson, Tex.; M. W. Waldman, V.-P., Beaumont, Tex.; plans for building incomplete; will install rotary drilling rigs.

Tex., Mexia.—Refinery.—Humphreys-Mexia Co. has purchased 350 acres land and will erect tanks and refinery. (Lately noted inceptd., capital \$2,500,000.)

Tex., Rockport.—Texas Coast Drilling Co., capital \$3000, inceptd. by Charles G. Johnson, F. B. Zachry, Gordon Gibson.

Va., Richmond.—Director of Public Utilities Trafford let contract to Jeffrey Mfg. Co. to erect 2 coke elevators at \$6325; to U. G. I. Construction Co. to erect parts for hydraulic operation and automatic control for water gas set at \$10,250.

W. Va., Morgantown.—Clay District Oil & Gas Co., capital \$50,000, inceptd. by S. F. Glascock, Richard E. Davis; both Morgantown; H. J. Hatzel, Farmington, W. Va.

Hydro-Electric Plants.

Mo., Eminence.—Western Tie & Timber Co., St. Louis, Mo., will build hydro-electric plant on Current River; transmission line to Poplar Bluff; construct steel towers and other facilities between power plant and Poplar Bluff; distance 75 mi.; cost \$350,000 to \$400,000.

N. C., Lenoir.—Catawba Valley Light & Power Co., Morganton, N. C., will build hydro-electric plant on Wilson Creek.

Tex., San Antonio.—Hot Wells Mineral Bath & Hotel Co. will build dam across San Antonio River for hydro-electric plant to develop 140 horse-power.

Va., Clarksville.—Roanoke River Development Co., Richmond, Va., will build hydro-electric plant on Roanoke River at Buggs Island.

Ice and Cold-Storage Plants.

Ga., Camp Bennings.—Alex. C. Doyle, Capt. Q. M. C. Construction Quartermaster will erect \$110,000 ice plant; concrete and brick construction; install mchy.; bids until Dec. 20; daily output 25 tons ice, 10 tons refrigeration. (Supersedes recent item.)

La., Kaplan.—Town will issue \$40,000 bonds to construct ice plant; Emile Miers, Gen. Mgr.

N. C., Winston-Salem.—Blue Ridge Ice & Coal Co., T. W. Weaver, Mgr., Newman, Ga., has option on site to erect plant; mchy. purchased.

Tex., Snyder.—Snyder Utilities Co. will improve ice and light plants; increase capacity.

Va., Roanoke.—Crystall Ice Co., 525 Brook Ave., let contract to W. P. Thurston to erect plant addition costing \$40,000.

Irrigation Systems.

La., Lake Charles.—Lake Charles Canal Co. increased capital from \$100,000 to \$300,000.

Land Developments.

Fla., Lake Jem.—Jem Nursery Co. organized, with D. C. Sherman, Prest.; F. A. Reed, V.-P.; L. E. Klatte, Secy-Treas.; will develop 200 acres for grove and nurseries. (Lately noted inceptd., capital \$100,000.)

Fla., West Palm Beach.—J. Hartnett, Palm Beach, Fla., has purchased tract; will develop for residential section to be known as Hartnett Park.

Ga., Lafayette.—W. A. Enlo, Mgr. Consolidated Textile Corp., Lafayette Div., will develop home grounds; E. S. Draper, Landscape Archt., Charlotte, N. C., and New York.

Ga., Lagrange.—Dunson Mills will develop playgrounds, park, grading for village improvements; E. S. Draper, Landscape Archt., Charlotte, N. C., and New York.

Lumber Manufacturing.

Ala., Gadsden.—Southern Mfg. Co. will install 3-C moulding machine; triple plant's capacity.

Ark., Cotter.—Gilbert & Potter will install rip-saw and planing mill.

Fla., Ocala.—Florida Orange Grove Corp., capital \$175,000, inceptd. with C. P. Anderson, Prest. and Treas.; F. B. Shaeffer, Secy.; H. P. McCurdy, Gen. Mgr.

Fla., Jacksonville.—Manning Lumber Co., 215 West Bldg., inceptd. with capital \$450,000.

Fla., Pine Harbor.—De Galvez Nursery & Development Co., capital \$50,000, inceptd. with Charles N. Goodnow, Prest.; Arthur B. McCold, V.-P.; John C. Coonleigh, Secy.

Fla., Williston.—Domestic Lumber Co. organized with \$25,000 capital.

La., Calhoun.—Calhoun Lumber Co. organized by E. O. Smith, G. H. Brown, J. T. Vinson.

Miss., Blanton.—W. L. Crenshaw & Co. organized with C. L. Crenshaw, Prest. and Mgr., Bank of Commerce Bldg., Memphis, Tenn., has plant; purchased mchy.; daily capacity 18,000 ft. hardwood lumber. (Lately noted inceptd., capital \$50,000.)

Miss., Derma.—H. E. Long will rebuild burned sawmill.

Miss., Hattiesburg.—Major-Sowers Saw Mill Co., capital \$100,000, inceptd. by L. L. Major and W. J. Sowers; changed name from National Lumber Co.

N. C., Charlotte.—George Stephens interested in organizing \$225,000 company; has purchased 80 acres land to develop as residential suburb.

N. C., Mount Olive.—Enterprise Lumber Co., Thos. O. Berry, Secy-Treas., will rebuild burned planing mill; construction by owner; install planers and motors. (See Machinery Wanted—Planers; Motors.)

Tenn., Bristol.—Paxton Lumber Corp. organized by M. K. Pierpont, Prest.; H. E. Pierpont, V.-P.; both Chicago, Ill.; M. E. Ellinger, Secy.; V. K. Simpson, Treas.; C. E. Paxton, Mgr.; all Bristol; has plant; daily capacity 400,000 ft. lumber; has plants in Virginia, North Carolina, Georgia and Louisiana. (Lately noted inceptd., capital \$15,000.)

Tenn., Memphis.—Hooper-Bennett Lumber Co., inceptd. with capital \$100,000.

Tex., San Antonio.—Hamilton Land & Development Co., capital \$249,000, inceptd. by V. E. Hamilton, Joseph Holub, W. H. Kennon.

Va., Roanoke.—Roanoke Lumber Co., capital \$100,000, inceptd. by J. O. Neanes, Prest., Lansing, N. C.; Carlton Penn, Secy., Roanoke.

Va., Strasburg.—Valley View Orchard Co. inceptd. with capital \$25,000.

W. Va., Handy Huff.—Handy Huff Land Co., capital \$50,000, inceptd. by Sam Poland, W. J. Hatfield, both Welch, W. Va.; W. W. Strickler, War, W. Va.

Metal-Working Plants.

Fla., Tampa.—Metal Posts, etc.—Ula White Way Post Co., capital \$50,000, inceptd. with W. G. Fulton, Prest.; R. S. Terry, V.-P.; E. F. Clifford, Secy.-Treas.; mfre, metal, concrete and wood posts.

Ky., Covington.—Art Metal.—Michaels Art Bronze Co., F. L. Michaels, 230 Scott St. will erect 4 story and basement factory addition; C. C. and E. A. Weber, Archts, Miller Bldg., Cincinnati, O. (Previously noted to erect.)

Tenn., Chattanooga.—Enamel Trays, etc.—Chattanooga Stamping & Enameling Co. will construct plant addition, fireproof construction, and install mchy. costing \$20,000; has let contract.

Tenn., Erwin.—Razors.—Triplex Safety Razor Co., capital \$5000, inceptd. by N. H. Plaster, R. L. Wesley, Costy Traylor.

W. Va., Wheeling.—Lamps, etc.—Wheeling Art Metal Mfg. Co., 161 19th St., organized, with T. J. Straight, Prest.; W. F. Maury, V.-P.; E. J. Surgison, Secy.-Treas. and Mgr.; has 40x60-ft. building and mchy. installed; mfre. small brass and white-metal castings and boudoir lamps. Lately noted inceptd., capital \$10,000. (See Machinery Wanted—Ingots.)

W. Va., Wheeling.—Tin Lithographing.—Wheeling Steel Corp. will erect addition to Yorkville tin mill; brick and concrete construction; cost \$150,000.

W. Va., Wheeling.—Axles.—Wheeling Axle Co. contract to J. E. Moss to construct 2 story plant addition. (Previously noted to erect.)

Mining.

Ga., Ellaville.—Bauxite.—William Hite, Columbus, O., will organize company to develop bauxite.

N. C., Shelby.—Mica.—J. M. Lefand and G. R. Minton will establish mica-mining plant.

Okl., Tulsa.—Stone.—Bedford Carthage Stone Co. will increase capital from \$10,000 to \$30,000.

Okl., Tulsa.—Sand and Gravel.—A. B. C. Sand & Gravel Co., 15 N. Lansing St., organized with C. T. Smith, Prest.; S. J. Wick, V.-P. and Mgr.; E. D. Rhodes, Secy.-Treas.; will install sand mchy. (Previously noted inceptd., capital \$10,000.)

Miscellaneous Construction.

Fla., Boynton.—City voted \$10,000 bonds to improve ocean front and electric-lighting plant. Address The Mayor.

Fla., Jacksonville.—Docks, etc.—City Comsn., John S. Bond, Chrmn., will extend municipal dock facilities, build additional open and covered piers 1000x120 ft. each; install electric cranes, trucks, etc.; vote in Jan. on \$1,000,000 bonds. (Lately noted.)

Fla., Jacksonville.—Dock.—Jewett, Bigelow & Brooks, Cincinnati, O., has leased 600x800-ft. dock for coal export and bunkering purposes; storage capacity 100,000 tons; can handle 300 tons per hour; mchy. purchased; begin shipping in Jan.

Fla., Kissimmee.—Lake Improvements.—City issued \$24,000 bonds for lake improvements. Address The Mayor.

Tex., San Antonio.—Artificial Lake.—Hot Wells Mineral Bath & Hotel Co. will construct dam across San Antonio River, making artificial lake of 8.6 acres for boating and swimming, etc.

Tex., Sulphur Springs.—Levee.—Hopkins County Levee Improvement Dist. No. 3 issued \$60,000 bonds for levee improvement.

Fla., Tampa.—Terminal.—Port Commrs., S. M. Sparkman, Prest., let contract to Seaboard Dredging Co., 204 E. Bay St., Jacksonville, Fla., to dredge 250x805x30-ft. slip, east side Ybor channel; Benjamin Thompson, Engr. (Bids lately noted.)

La., New Orleans.—Dock Improvements.—State Dock Board, W. O. Hudson, Prest., 200 New Court Bldg., will expend \$1,000,000 on dock extensions and port facilities; rebuild Desire and Pauline St. wharf, erect 200x500-ft. wharf at Clouet Landing and enlarge Press-St. wharf; let contract to Sadler Bros. Construction Co. for construction of 4th St. wharf.

Okl., May.—Channel.—City has plans to change channel of Beaver River, costing \$1780; to vote on bonds. Address The Mayor.

S. C., Charleston.—Wharves.—H. F. Barkerding let contract to Jefferson Construction Co. to build 177-ft. wharf and slip; later to erect additional building.

Tenn., Nashville.—Memorial.—State Memorial Comsn. will erect war-hero memorial; issue \$2,000,000 bonds.

Tex., Austin.—Memorial Monument.—University of Texas, Robert E. Vinson, Prest.; will erect war hero memorial monument costing \$250,000; granite construction, with figures; let contract to Pompeo Coppini, Chicago, Ill. (Supersedes recent item.)

Tex., Corpus Christi.—Pier, etc.—City; contemplates construction of pier and 6000 ft. of boardwalk along line of new breakwater. Address The Mayor.

Va., Norfolk.—Wharf, etc.—War Dept., U. S. Engr., Washington, D. C., will dredge Elizabeth River and construct timber wharf; bids until Jan. 7. (See Machinery Wanted—Dredging, etc.)

Miscellaneous Enterprises.

Ala., Anniston.—Potato Curing.—Chamber of Commerce is interested in establishing \$10,000 potato drying and storage plant; capacity 15,000 bu.

Ala., Birmingham.—Laboratories.—Southern Testing Laboratories, American Trust Bldg. (lately noted inceptd., capital \$25,000), organized by J. F. Carle, Prest.; Wm. Makemson, Secy.; will establish commercial laboratory, etc. (See Machinery Wanted—Testing Laboratory Equipment.)

Ala., Birmingham.—Potato Curing.—Dixie Food Products, 1038 First National Bank Bldg., capital \$100,000, organized with F. D. Lander, Prest.; F. L. Cade, V.-P.; W. L. Bruce, Secy.-Treas.; will erect sweet-potato-curing houses in units of various sizes according to Government plans; bids about next June.

Ala., Gadsden.—Amusement Park.—O'Bryant Park & Amusement Co., capital \$5000, inceptd. with B. G. O'Bryant, Prest.; Rufus Wood, V.-P.; W. M. Young, Secy.

Ala., Cullman.—Laundry.—Henry Arnold will erect building, install \$21,000 laundry mchy.; Henry Schafer in charge.

D. C., Washington.—Aeronautical Operators. Aeronautical Operators Corp., capital \$25,000, chartered by Harold E. and Irene Hartney, Isabel McGearry.

Fla., Miami.—Construction.—Douglas Properties Co., capital \$250,000, inceptd., with Edw. B. Douglas, Prest.; Gussie P. Douglas, V.-P.; Harry C. Budge, Secy.-Treas.

Fla., Miami.—Building.—Home Builders' Corp. organized with Hugh M. Anderson, Prest.; J. M. Markley, V.-P.; R. B. Leonard, Secy.-Treas. (Lately noted inceptd. capital \$250,000.)

Fla., Miami.—Contracting.—Thomas A.

Koons, capital \$10,000, organized with Thomas A. Koons, Prest.-Treas.; Virginia Nell Koons, Secy.; both Miami, Louis A. Koons, V.-P., Massillon, O.

Fla., Miami.—Construction.—Ward-Arthur Co., capital \$100,000, inceptd., with P. H. Arthur, Prest.; H. Althea Ward, V.-P.; C. H. Ward, Secy.-Treas.

Fla., Tampa.—Construction.—Brogden, Ricketts & Haworth Co., capital \$500,000, inceptd. by R. M. Brogden, Prest.; H. C. Ricketts, V.-P.; Albert Haworth, Secy.-Treas.

Ky., Hazard.—Publishing.—Hazard Leader inceptd. by P. T. Wheeler, W. A. Stanfill and W. B. Roberts.

La., Alexandria.—Fire Equipment.—City, C. N. Adams, Mayor, will expend between \$15,000 and \$20,000 on fire-alarm system and department.

Md., Chevy Chase.—Griffith & Perry, capital \$75,000, inceptd. by Thomas W. Perry, Estella P. Weaver; both Chevy Chase; Howard Griffith, Silver Spring, Md.

Md., Hagerstown.—Fruit.—Western Maryland Fruit Co., capital \$10,000, inceptd. by J. Morris Guider, Karl E. Yound, Paul H. Fechtig.

N. C., Durham.—Amusements.—Durham Amusement Co. capital \$100,000, inceptd. by G. W. and R. I. Pryor, T. G. Leitch.

N. C., Monroe.—Transportation.—Blakeney Truck & Transfer Co. has been inceptd. by M. F. Blakeney, W. M. Fowler, Mrs. Kate A. Fowler.

N. C., Rocky Mount.—Construction.—Plant Construction Co., capital \$50,000, inceptd. by N. L. Alcock, Millard F. Jones, Norman G. Chambliss.

N. C., Wilmington.—Ferry Improvements.—New Hanover County Commrs. issued \$50,000 bonds for ferry improvements.

N. C., Wilson.—Building Materials.—Builders' Material Co., Box 344, capital \$250,000, inceptd. by W. R. Wyatt, Wilson; A. B. Consolvo, A. D. Overmyer, both Norfolk, Va. (Supersedes recent item.)

N. C., Weldon.—Contractors.—Harrington & Hardy, capital \$10,000, inceptd. by R. D. and S. A. Harrington, J. P. Hardy.

Tenn., Clarksville.—Dairy.—H. M. Cox, Bristol, Tenn., and Jas. Bailey, Denver, Col., will establish dairy.

Tex., Breckenridge.—Publishing.—Breckenridge Publishing Co., capital \$50,000, inceptd. by C. M. Caldwell, E. F. Hurja, Geo. T. Wilson.

Tex., College.—Laboratory.—Texas Agricultural and Mechanical College, W. B. Blizzell, Prest.; will rebuild burned laboratory; loss \$75,000.

Tex., Dallas.—Potato Curing.—Ralph M. Love & Co. will rebuild potato-curing plant.

Tex., Dallas.—Engraving.—A. Zeese Engraving Co., Tom P. Thornton, Prest.-Mgr., let contract to Christy Dolph Construction Co., to erect 50x100-ft. building; mchy. purchased; E. Ross Chamblin, Archt. (Previously noted to increase capital to \$90,000.)

Tex., Houston.—Construction.—Womack Construction Co. has increased capital from \$60,000 to \$100,000.

Va., Richmond.—Publishing.—Richmond Publishing Corp., capital \$100,000; inceptd. with Blair B. Stringfellow, Prest.; G. Stanley Harding, Secy.

Va., Richmond.—Printing.—Bixby Letter Co., 28 N. Eighth St., capital \$10,000, organized with W. J. King, Jr., Prest.; S. M. Atkinson, V.-P.; M. Atkinson, Secy.; multigraph 100,000 letters daily.

W. Va., Charleston.—Laundry.—Superior Laundry Co., capital \$50,000, inceptd. by Alban Young, Harry W. Comstock, S. P. Richmond.

Miscellaneous Factories.

Ark., Fort Smith—Bakery.—Edmondson Bakery Co. will erect plant addition; bids until Jan. 1.

Ark., Yellville—Cigars.—C. R. Strauss, Flipin, Ark., will establish cigar factory.

Fla., Jacksonville—Bottling.—Orange Crush Bottling Co., capital \$75,000, inceptd. with S. McL. Estes, Prest.; Thomas B. Adams, V.-P.; May E. Kaderly, Secy.-Treas.

Fla., New Smyrna—Bottling.—Lowe Bottling Works, H. W. Lowe, Daytona, Fla., let contract to erect 30x100-ft. fireproof building costing \$4000; has installed \$5000 bottling mchy. (Lately noted to install branch plant.)

Fla., West Haven—Food Products.—Great Food Products Corp., capital \$100,000, chartered by W. D. Hart, Prest.; E. W. Drake, V.-P.; W. E. Kingston, Secy.-Treas.; all Atlanta, Ga.

Ga., Atlanta—Leather, etc.—National Leather & Findings Co., capital \$100,000, inceptd. by Robert E. Katz, R. H. Holmes, W. P. Bloodworth.

Ga., Columbus—Overalls.—Southern Overall Co., capital \$50,000, inceptd. by John D. and Frank T. Schnell; has plant; will install additional mchy., double capacity.

Ga., Valdosta—Turpentine, etc.—Georgia Pine Products Co., capital \$20,000, inceptd. by W. T. Dickerson, E. Lee Worsham, B. H. Roberts.

Ky., Louisville—Candy.—National Candy Co., 329 S. Floyd St., will erect plant addition 5 stories and basement; reinforced concrete construction; 135x216 ft.; D. X. Murphy & Bro., Archts., Louisville Trust Bldg.

Ky., Louisville—Merchandise, etc.—Factory Products Co., capital \$25,000, inceptd. by E. E. Pendergrass, Jas. H. Parker and Bernhold Hoechner.

Ky., Louisville—Steel Wool.—Galvin Bros. Steel Wool & Mfg. Co., capital \$24,000, inceptd. by Fred A. Galvin of Louisville, J. L. Heffernan of Jellico, Tenn., and Geo. B. Galvin of Springfield, O.

Ky., Louisville—Trousers.—H. & S. Pants Mfg. Co. increased capital from \$15,000 to \$25,000.

La., Bogalusa—Turpentine, etc.—Essential Oil Co., Phila., Pa., has purchased plant of Louisiana Fibre Board Co.; will remodel for extracting rosin, turpentine and pine oil from pine stumps.

La., Kaplan—Rice Product.—Company has been organized, capital \$5000, with Mrs. Chas. Saint, Prest.; Chas. Saint, V.-P.-Treas.; Edward Dousat, Mgr., will erect factory and install mchy.; purchased; mfrs. rice product.

La., Monroe—Creamery.—Watson & Aven Ice Cream Co. will establish creamery and install \$10,000 mchy.

La., Plaquemine—Syrup.—Antonio Anzeline will rebuild burned syrup mill; loss several thousand dollars.

La., Swartz—Carbon.—Diamond Carbon Co., P. M. Beacom, Prest., New York; will erect \$250,000 carbon-black factory.

Md., Baltimore—Laboratory and Chemical Supplies.—Marshall Rieha inceptd. with A. E. Marshall, Prest.; Edward L. Rieha, V.-P.; M. J. Nelligan, Secy.; T. J. Dee, Treas.; 1602 Lexington Bldg.; capital \$100,000.

Md., Baltimore—Bakery.—Chas. Raith, Pennsylvania Ave., will expend \$10,000 on building improvements; J. Franklin Nelker, Archt., 209 Professional Bldg.

Md., Baltimore—Drugs, etc.—Burch & Kleps Co., 512 Equitable Bldg., capital \$100,000, inceptd. by Michael Bernstein, Joseph Razansky, Jacob Amolsky.

Md., Baltimore—Rubber.—Eastern Rubber Products Co., 361 N. Calvert St., capital \$40,000, inceptd. by Charles M. Wyatt, Charles F. Black, Chester B. Kegarice.

Md., Baltimore—Chemicals, etc.—Marshall inceptd. by A. E. Marshall, Edward L. Rieha, Rieha, 1602 Lexington Bldg., capital \$100,000, Maurice J. Nelligan.

Md. (Halpine), Rockville—Shoe Heels and Shoes.—International Shoe Heel Corp. will expend \$350,000 on buildings and equipment; erect 4 heel shops each 1 story 200x35-ft., 2 shoe shops each 4 story 200x45 ft.; special concrete construction, with asbestos or slate roofing and all-wood floors; H. C. Cutler, Archt. and in charge of construction, Mutual Fire Bldg., 13th and H Sts., Washington, D. C. (Previously noted.)

Md., Smithburg—Vinegar, etc.—Blue Mountain Food Prod. Co., capital \$20,000, organized with James C. Feese, Prest.-Mgr., Smithburg; P. G. King, Secy.; H. Heneberger, Treas.; both Waynesboro, Pa.; will establish plant; install vinegar generators and evaporators; daily capacity 8 bbls. apple butter, 50 bbls. vinegar. (See Machinery Wanted—Containers; Vinegar-making Machinery; Apple Butter-making Machinery.)

Mo., Kansas City—Syrup, etc.—Corn Products Refining Co., E. T. Bedford, Prest., 17 Battery Pl., New York; J. J. Merrill, Gen. Mgr., Chicago, Ill., let contract to Bedford Stone and Construction Co., Indianapolis, Ind., to erect 3 unit manufacturing plant; (previously noted to expend \$7,000,000 to \$8,000,000 on site, engineering, buildings, mchy., etc.; using 25,000 bu. corn and 10,000,000 gals. water daily).

Mo., Springfield—Creamery.—Patton Creamery Co. has increased capital from \$75,000 to \$150,000.

N. C., Winston Salem—Candy.—Vanola Co. will increase capital from \$500,000 to \$1,000,000.

S. C., Anderson—Drugs.—Beck Drug Co., capital \$400,000, inceptd. with J. M. Beck, Prest.; W. F. Marshall, V.-P.; L. S. Horton, Secy.; J. M. Beck, Treas.

Tenn., Chattanooga—Brower Mfg. Co., capital \$100,000, inceptd. by Howard G. Brower, Joseph W. Johnson, Paul Campbell.

Tenn., Knoxville—Ice Cream.—Mono Service Cream Co., 400 Chamberlain St., will erect 4-story-and-basement 70x98-ft. plant addition; F. E. Hicks, Archt., Holstein Bank Bldg.

Tenn., Knoxville—Soap.—Tennessee Soap Co., 113 Empire Bldg., Geo. R. Brannan, Mgr. will establish soap mfg. plant; install \$20,000 mchy.; bids until March 1. (Previously noted inceptd., capital \$150,000.)

Tex., Dallas—Bakery.—Campbell-Stone Bakery Co. will increase capital from \$250,000 to \$400,000.

Tex., Dallas—Factory Outfits.—Factory Outfit Co., capital \$50,000, inceptd. by C. R. Cooper, H. F. Carpenter, C. M. Smith.

Tex., El Paso—Overalls.—R. F. Leininger, Fort Smith, Ark., is interested in establishing overall factory.

Tex., Houston—Photography.—Aerial Photo Co., capital \$5000, inceptd. by C. L. Porter, N. B. and Bernice Ison.

Tex., Houston—Chemicals.—American Chemical Co., capital \$25,000, inceptd. by E. H. Vann, Rutherford Lawrence, O. D. Thomas.

Tex., Houston—Batteries.—Houston Battery Service Co., capital \$10,000, inceptd. by Will G. Van Vleck, P. R. Tiller, Robert L. Sonfield.

Va., Richmond—Blotting Paper, etc.—Standard Paper Mfg. Co., James F. Ryland, Secy.-Treas., will erect plant addition known as No. 3 mill, costing \$750,000; mchy. purchased; mfrs. blotting and absorbent paper. (Super-sedes recent item.)

W. Va., Huntington—Creamery.—Wilson Creamery Co., Joe L. Wilson, Prop. and

Gen. Mgr.; has plans for the erection of \$200,000 building; purchased additional 30-ft. lot; completed plant will be 2-story 160x90 ft.; install mchy.

W. Va., Martinsburg—Bakery.—People's Bakery Co. of Maryland will establish branch plant.

Motor Cars, Garages, Tires, Etc.

Ala., Birmingham—Garage Addition.—Jefferson County Board of Revenue will erect addition to garage; brick; \$5000.

D. C., Washington—Garage.—Government will erect garage and laundry; low bidder, Asher Fireproof Co., South Bldg.

Fla., Cocoa—Automobiles.—Indian River Garage, capital \$25,000, has been inceptd. by L. S. Andrews, L. B. Hill, C. S. Smith.

Fla., Seebreeze—Garage.—I. W. Ramsey will erect garage, with apartment on second floor.

Fla., Titusville—Motors.—Superior Motor Works will incorporate; capital \$100,000; Thomas G. Knight, Prest.; E. J. Stewart, Treas.; R. B. Hawley, Mgr and Secy.

Ga., Columbus—Repair Shop.—Construction Quartermaster, Headquarters Bldg., Camp Benning, will erect motor repair shop; \$25,000; Selden Breck Construction Co., Contr.

Ky., Louisville—Automobiles.—Both Motor Co., capital \$30,000, has been inceptd. by J. E. Roth, Albert Roth, Ray B. Meyers.

Ky., Louisville—Motors.—O. K. Motors Co., J. P. Ouerbacker, Prest., has increased capital from \$25,000 to \$75,000.

Ky., Louisville—Motor Trucks.—Indiana Brocar Truck Co. inceptd.; capital \$25,000; Thomas J. Brocar, Geo. M. Royce, Florence M. Brocar.

La., New Orleans—Automobile Shed.—Abbott Automobile Co. will erect automobile shed; \$4557; R. P. Farnsworth & Co., Contrs.

Md., Baltimore—Garage.—Henry C. Weber will erect \$6500 garage; 1 story; steel.

Md., Baltimore—Garage.—Chas. Harrlinger, 1406 Harford Ave., will erect \$4000 garage; 1 story; brick; C. K. Wells, Jr., Contr., 2919 Guilford Ave.

Md., Salisbury—Garage.—Benton T. Calloway will erect garage.

Miss., Jackson—Automobiles.—W. T. Pate Automobile Co. increases capital from \$25,000 to \$125,000.

Mo., Kansas City—Garage.—Ever Ready Garage, 1817 W. 39th St., will rebuild burned garage; loss \$4000.

Mo., Kansas City—Garage.—E. Harvey, 238 Lathrop Bldg., will erect garage; 1 story and basement 100x140 ft.; brick; stone trimming; reinforced concrete; fireproof; composition roof; Van Brunt & Hertz, Archts., Reliance Bldg.

Mo., Kansas City—White Co., E. 79th St. and St. Clair Ave., Cleveland, O., will erect service station; 3-story, 120x144 ft.; reinforced concrete; brick; steel; reinforced concrete flooring; brick and concrete foundation; Watson Engineering Co., Archt.-Engr., Hippodrome Bldg., Cleveland, O.

N. C., Charlotte—Automobiles.—Caldwell, Tredenick & Lambeth, capital \$200,000, has been inceptd. by Charles E. Lambeth, T. F. Caldwell, T. S. Tredenick.

N. C., Shelby—Garage.—Charles L. Eskridge, 124 W. Marion St., will remodel present garage; pressed-brick front with stone trimmings; tile floors; showroom, stockroom, general office, private office and ladies' restroom; Louis H. Asbury, Archt., Realty Bldg., Charlotte, N. C.; W. G. Bailey, Constr. Engr., Box 160, Shelby. Lately noted. (See Machinery Wanted—Turntable.)

Okla., Oklahoma City—Trucks.—Patrick

Truck Co., capital \$10,000, has been inceptd. by M. H. Adams, Loy Leffingwell, Gustave A. Erixson.

Okl., Oklahoma City—Garage.—T. C. Huff, care of G. A. Nichols, S. W. National Bank Bldg., will erect garage; 1 story and basement 53x140 ft.; brick; stone trimming; composition roof.

Tenn., Chattanooga—Automobiles.—Forstner Motor Sales Corp. increases capital from \$25,000 to \$50,000.

Tenn., Chattanooga—Tires and Tubes.—Du Bois Rubber Co. will erect first unit of plant; purchase mchy.; daily output 500 tires and 500 tubes; construct building so that additional units may be added without interfering with operations; ultimate capacity 20,000 tires daily; W. L. McLane, Archt.-Engr., Cleveland, O. (Lately noted preparing plans.)

Tenn., Knoxville—Garage.—Mono Service Ice Cream Co., 400 Chamberlain St. will erect garage; 2 story 62x82 ft.; brick.

Tex., Amarillo—Automobiles.—Wichita Automobile Co.; rebuild burned building.

Tex., Dallas—Automobiles.—Circle Automobile Men's Assn. of America, C. H. Wrightman, Prest., Main St., is erecting \$10,000 automobile building; women's rest rooms, men's lounging rooms, general offices, etc.

Tex., Fort Worth—Garage.—Hamlett-Tucker Co., capital \$7500, inceptd. by Staley Hamlett, John T. Tucker, T. R. James.

Tex., Houston—Tires.—Gulf Coast Tire & Repair Co. increased capital from \$20,000 to \$50,000.

Tex., Houston—Automobiles.—Sherwood Automobile Market, W. C. Roberts, Prest., will erect automobile building; 2 stories and basement; foundation strong enough for 10 stories; \$100,000; W. C. Hedrick Construction Co., Contr.

Tex., Orange—Garage.—C. B. Holstead Co., capital \$75,000, inceptd. by C. M. Holstead, Dolta St. Germain and C. G. White.

Tex., San Antonio—Garage.—J. Stephens will erect \$18,000 garage.

Tex., San Antonio—Garage.—J. J. Stevens; erect \$18,000 garage.

Va., Richmond—Garage.—Marshall Realty Co., Jake Wells, W. G. Neal and others will erect garage.

Va., Richmond—Garage.—Richmond-Kline Co., capital \$50,000, has been inceptd.; W. B. Vaden, Prest.; Vance Terrell, Secy.

Va., Richmond—Garages.—Alice S. Holland, 105 N. Sheppard St. will erect 6 garages; \$3,000; H. S. Holland, Contr.

Va., Roanoke—Motors.—Day & Night Motor Corp., Henry St. and Luck Ave.; increased capital from \$25,000 to \$99,000.

W. Va., Logan—Automobiles.—Overland-Logan Sales Co. inceptd.; capital \$25,000; I. C. Jesse, J. C. Patterson; both Logan; G. W. Henshaw, Huntington, W. Va.

W. Va., Welch—Automobiles.—Welch Automobile Co. organized with R. H. Miller, Prest.; W. W. Hughes, V.-P.; Graham Sale, Secy.; will erect \$30,000 building; 31x55 ft.; brick; bids about Mar. 1. (Lately noted inceptd., capital \$100,000.)

Railway Shops, Terminals, Roundhouses, Etc.

Ky., Loyall—Louisville & Nashville R. R., W. H. Courtenay, Ch Engr., Louisville, Ky., will construct 600-ton coaling and sanding station; reinforced concrete; provide facilities for coaling and sanding locomotives on four tracks.

Tex., Bonham—Texas & Pacific Ry., E. F. Mitchell, Ch. Engr., Dallas, Tex., will install 75-ft. turntable; electrically driven.

Tex., Houston.—Southern Pacific Ry., W. Hood, Ch. Engr., San Francisco, Cal., will rebuild burned shops; loss \$1,000,000.

Road and Street Construction.

Ala., Camden.—Wilcox County Comms. Roads and Revenues, Pat M. Dannelly, County Judge, will construct hard-surfaced road from Four-Mile Hill to Boykin Bridge; bids until Jan. 3. (See Machinery Wanted—Road Construction.)

Ark., Mena.—Polk County Road Dist. No. 1 will construct roads; issued \$175,000 bonds.

Ala., Montgomery.—City, C. B. Smith, City Clk.; will pave streets, etc.; issue \$95,000 bonds.

Ala., Montgomery.—Montgomery County Board of Revenue plans hard-surfaced road from extension of Bell St. to Repair Depot; Thomas H. Edwards, County Engr.

Ark., Powhatan.—Western Lawrence County Road Improvement Dist. will construct roads; issued \$27,500 bonds.

Ark., Fort Smith.—Fort Smith Road Improvement Dist. Comms. Kennedy Bldg. will construct 41 mi. asphalt macadam penetration method road; bids until Dec. 15. (See Machinery Wanted—Road Construction.)

Ark., Searcy.—White County Comms. Beebe, Antioch and Lonoke Road Dist. will construct roads; issued \$17,500 bonds.

D. C., Washington.—District Comms. will pave 30 blocks; invite bids in January.

D. C., Washington.—Bureau Yards and Docks, Navy Dept., will construct 5575 sq. yds. one-course plain concrete roads; bids until Dec. 29. (See Machinery Wanted—Road Construction.)

Fla., Bonifay.—Holmes County Comms.' Road Dist. No. 3 will construct roads; issued \$37,000 bonds.

Fla., Buena Vista.—City of Miami, Fla., will construct 80,952 sq. ft. concrete sidewalk; 18,203 lin. ft. concrete curb; 26,950 sq. yds. rock paving; 26,950 sq. yds. oiling; 8094 sq. yds. rock paving alleys; bids opened; P. L. Watson, Civil Engr., Hill Bldg., Miami.

Fla., Green Cove Springs.—Clay County Special Road and Bridge Dist. No. 2 will construct roads; issued \$9500 bonds.

Fla., Jacksonville.—City will pave streets. Address City Engineer.

Fla., Key West.—City, Geo. A. T. Roberts in charge, will construct marl pavement, concrete curb and gutter; \$100,000; also concrete sidewalks; \$50,000; B. C. Moreno, City Engr. (Lately noted issuing bonds.)

Fla., Macclenny.—Baker County Comms. Road and Bridge Dist. will construct roads; issued \$15,000 bonds.

Fla., Tampa.—Comms. Public Works, Allen Thomas, Clk., will pave Ashley St., 70 ft. wide; vitrified brick grouted with asphalt and laid on foundation of crushed rock; Holwell & Owens Co., Contrs. (Lately noted inviting bids.)

Fla., Tavares.—Lake County Good Roads Assn. will construct sand-clay roads; plan voting on \$500,000 bonds.

Fla., West Palm Beach.—J. Harnett, Palm Beach, Fla., will build streets through Harnett Park. (See Land Developments.)

Ga., Americus.—State Highway Dept. of Georgia, Atlanta, Ga., will grade, topsoil and build culverts on 5 mi. Georgetown-Fort Gaines road; sand-clay; \$30,000 Federal and State aid; M. H. Gardiner, Contr., Columbus, Ga.; W. C. Caye, Jr., Div. Engr., Americus, Ga. (Lately noted inviting bids.)

Ga., Manchester.—City will pave streets, etc.; voted \$50,000 bonds. Address The Mayor.

Ga., Savannah.—City, M. M. Stuart, Mayor,

will pave West Broad St. from Indian to 31st St.; invites bids.

Ga., Valdosta.—Lowndes County Comms. are constructing roads; Nichols Construction Co., Contr.; will issue \$50,000 bonds.

Ga., Washington.—Wilkes County Comms. will construct 1.76 mi. bituminous macadam paving on State Route No. 17 on Washington Toccoa Rd.

Ky., Paducah.—Cottle County Comms., W. J. Arrington, County Judge, will construct 18.2 mi. Highway No. 4; surfaced with sand-clay; \$88,951.32; Hess & Skinner, County Engrs., Southwestern Life Bldg., Dallas, Tex.

Ky., Whitesburg.—Letcher County Commissioners will construct 4 mi. Whitesburg-to Hindsman highway; earth road; 100,000 cu. yds. excavation; contract to Hale & Hall, Whitesburg, for Section 1, and T. R. Rainero, Seco, Ky., for Section 2. (Previously noted inviting bids.)

La., De Ridder.—Beauregard Parish Police Jury will construct roads in Dists. 2, 4 and 6; sold \$327,000 bonds.

La., Lake Charles.—Calcasieu Parish Police Jury are progressing with construction of Pelican highway, which will connect Lake Charles with Alexandria; Section C is 10 1/2 mi. and second section is 17 mi.

La., Lake Charles.—City, L. L. Squires, Clk., will pave Iris, Sixth, Mill, Seventh, Common and other streets and avenues.

La., New Orleans.—District Road Committee will construct 9 mi. highway, beginning at Amite River on the west and extending east as far as village of Walker; contract let.

La., New Orleans.—City let paying contracts as follows: Craven & Lang, 1015 Hibernia Bank Bldg., pave Audubon St. from Zimple St. to St. Charles Ave., bitulithic; A. P. Boh, 4148 Banks St., construct sub-surface drains.

Md., Baltimore.—Board of Awards will grade streets listed in Contract No. 178, including Chase St. from Loney's Lane to 11th St., Loney's Lane from Chase to Preston St., Preston St. east of Potomac St. to Loney's Lane; 28,000 yds.; \$25,000 to \$30,000 available; Wm. Meyer, Contr., 121 S. Linwood Ave. (Lately noted inviting bids.)

Md., Frederick.—State Roads Comsn., 601 Garrett Bldg., Baltimore, will construct 2.22 mi. 14-ft. macadam road from Harmony Grove to Frederick; Frederick County, Contract F-41; low bidder, M. J. Grove Lima Co., Lime Kiln, Md., at \$28,877.25; W. F. Childs, Jr., Dist. Engr., Frederick, Md. (Lately noted inviting bids.)

Md., Baltimore.—Paving Comsn. will pave Pratt St. from Broadway to Patterson Park Ave., Fleet St. from Patterson Park Ave. to West Ave., Charles St. from Saratoga St. to Barre St., Centre St. from St. Paul St. to Fallway, Lombard St. from Hanover St. to South St., from Gay St. to Exeter St. to from Fremont Ave. to Payson St., etc.; total 6 mi.; \$2,000,000 available; Henry G. Perring, Ch. Engr.

Md., Frederick.—State Board Public Works will construct roads; issue \$2,000,000 State securities.

Md., Hagerstown.—Washington County Commissioners will rebuild Broadfording Rd. from Greencastle Pike to Broadfording Bridge.

Mo., Kansas City.—Board Public Works will grade and pave 21 blocks Gardner Ave. and 4 blocks on Monroe St.; concrete; bids opened in spring.

Miss., Greenwood.—Leflore County voted \$300,000 bonds. Address County Comms.

Miss., Hattiesburg.—City, T. E. Batson, Mayor, will pave Newman St.; bids until Dec. 16. (See Machinery Wanted—Paving.)

Miss., Oxford.—Lafayette County, Beat 3 Road Dist., N. Price, Chrmn., will construct road; bids until Dec. 17; W. D. Hedleston, Jr., Water Valley, Miss. (See Machinery Wanted—Road Construction.)

Mo., Bowling Green.—State Highway Dept., Jefferson City, Mo., will construct 2.85 mi. State road north of Bowling Green, 24 ft. wide; State-aid Project S-20.21, Pike County.

Mo., Cassville.—Barry County Comms. Wheaton Special Road Dist. will construct roads; sold \$25,000 bonds.

Mo., Grant City.—State Highway Dept., Jefferson City, Mo., will construct 1.04 mi. East and West State road, east of Grant City, 24 ft. wide; State-aid Project S-20.20, Worth County.

Mo., Kingston.—State Highway Dept., Jefferson City, Mo., will construct 3.57 mi. State road north of Kingston, 24 ft. wide; State-aid Project S-20.22, Caldwell County.

Mo., Ozark.—State Highway Dept., Jefferson City, Mo., will build 3½ mi. road from Christian County line near Republic to Webster County line; \$243,000.

Mo., Springfield.—State Highway Dept., Jefferson City, Mo., will build 7 mi. road from Mills Corner to Lawrence County line; \$35,000; 9½ mi. road from James River bridge south of Springfield to Rogersville; \$97,000.

Mo., St. Joseph.—Buchanan County Commissioners will pave 20 mi. road; concrete; O'Brien-Cook Construction Co., Contr., Kansas City, Mo.

Mo., St. Louis.—City will improve Cleveland Ave.; \$19,250; E. F. Harper, City Engr.

N. C., Billington.—Harnett County Comms., Lillington Township, will construct roads; issued \$8000 bonds.

N. C., Fayetteville.—City, T. M. Shaw, Treas., will pave streets; issue \$80,000 bonds.

N. C., Hendersonville.—City, Geo. W. Brooks, City Clk., will pave streets; issue \$250,000 bonds. (See Machinery Wanted—Road Engineer.)

N. C., High Point.—City will construct 7000 sq. yds. warrenite-bitulithic pavement on 5-in. concrete base; R. G. Lassiter, Contr., Kenoughton Road, Norfolk, Va.

N. C., Kings Mountain.—City will pave streets; issued \$18,000 bonds. Address The Mayor.

N. C., Marion.—McDowell County Comms., H. F. Little, Chrmn. Highway Comsn., will construct roads and bridges; issue \$150,000 bonds.

N. C., Monroe.—State Highway Department, Div. Office, Greensboro, N. C., will construct 2.28 mi. road in Union County; Project No. 39; bids opened Dec. 17. (See Machinery Wanted—Road Construction.)

N. C., Winston-Salem.—Forsyth County Commissioners contemplate voting in January on \$2,000,000 bonds for hard-surfaced roads.

N. C., Winston-Salem.—Forsyth County Highway Comsn. will construct soil road from Lewisville to Styler's Ferry; Smith & Sons, Contrs.

N. C., Winston-Salem.—City, W. H. Holcomb, Clk., will pave sections of Jersey and Carolina Aves., Sunset Drive, etc., with brick, asphalt, bitulithic or bituminous concrete or concrete; will issue \$231,568.63 bonds.

N. C., Wilmington.—New Hanover County Comms. will construct extension of Carolina Beach Rd. to Fort Fisher.

Okla., Ada.—City will pave 15 blocks; Johnson & Benham, Consult. Engrs., Kansas City, Mo.

Okla., Ardmore.—State Highway Dept., Henry Wood, Commr., Oklahoma City, will construct 15.98 mi. road in Carter County; bids until Dec. 21. Lately noted. (See Machinery Wanted—Road Construction.)

Okla., Cement.—Town will improve streets; rock foundation covered with layer of chat; \$10,000. Address The Mayor.

Okla., Duncan.—City plans 50 additional blocks of paving. Address The Mayor.

Okla., Enid.—City will pave streets; issued \$45,000 bonds. Address The Mayor.

Okla., Eufaula.—State Highway Dept., Henry Wood, Commr., Oklahoma City, will construct 20 mi. gravel road; bids until Dec. 21. (Lately noted.)

Okla., Eufaula.—State Highway Dept., Henry Wood, Commr., Oklahoma City, will construct 21.79 mi. gravel road in McIntosh County; bids until Dec. 21. Lately noted. (See Machinery Wanted—Road Construction.)

Okla., Hartshorne.—City, Joe Merrill, City Clk., will pave 8½ blocks street; concrete; \$72,000 available; bids opened in spring; V. V. Long & Co., Engrs., Oklahoma City. Lately noted. (See Machinery Wanted—Paving.)

Okla., Lawton.—Comanche County Commissioners will construct roads; Federal-aid Project 22; Allen & Harrison, Contrs., Henryetta, Okla.

Okla., Oklahoma City.—State Highway Dept., Henry Wood, Commr., will construct 13 mi. road in Oklahoma County; \$540,000 available; bids until Dec. 21. Lately noted. (See Machinery Wanted—Road Construction.)

Okla., Oklahoma City.—City Comsn. will construct 16,750 sq. yds. paving on 14th, 44th and 1st Sts. and Everest Ave.; total cost \$67,028.

Okla., Muskogee.—Muskogee County Commissioners will construct hard-surfaced roads; \$400,000; proposed.

Okla., Weatherford.—City, Eugene Forbes, Mayor, will pave 13 blocks of street; \$181,000 available; bids opened in spring; V. V. Long & Co., Engrs., Oklahoma City. Lately noted. (See Machinery Wanted—Paving.)

S. C., Orangeburg.—Orangeburg County Comms., Hugo S. Sims, Clk., will construct 13-mi. sand-clay road on Columbia-Savannah highway; \$61,000; J. L. Carroll, Contr., Anderson, S. C.; Ambrose Harwell, Div. Engr., Charleston, S. C. (Lately noted inviting bids.)

S. C., Rock Hill.—City will pave streets; bids opened in January; sold \$100,000 bonds; Gilbert C. White, Engr., Durham, N. C.

Tenn., Columbia.—Maury County Comms. will complete Jackson Military Highway from Columbia to Lawrence County line, etc.; voted \$30,000 bonds.

Tenn., Maryville.—Blount County Comms. will construct roads; issue \$150,000 bonds.

Tex., Amarillo.—Potter County Comms. will improve Ozark Trail, St. Francis and Washburn roads; \$1,000,000 available; A. T. Dickek, Resident Engr.

Tex., Breckenridge.—City will pave streets; voted \$300,000 bonds. Address The Mayor. (Lately noted to vote.)

Tex., Brenham.—City, A. A. Hacker, Mayor, will pave streets; vote Dec. 20; changed date from Dec. 16.

Tex., Brownsville.—Cameron County Comms., Oscar C. Dancy, County Judge, will construct 4 mi. Highway No. 12 from Brownsville to Olmito; \$37,546.93; W. T. Montgomery, Contr., Alamo Bank Bldg., San Antonio, Tex.; W. O. Washington, County Engr.

Tex., Burnet.—Burnet County Comms., C. A. Baker, Commr., Briggs, Tex., plan construction of 10 mi. Highway 36B; Hess & Skinner, Engrs., Southwestern Life Bldg., Dallas, Tex.

Tex., Cameron.—Milam County Comms. will grade, surface and drain 18.86 mi. Highway 36 through Road Dist. 2 and 29; 44,000 cu. yds. gravel surfacing; 28,000 lbs. reinforcing steel; A. F. Mitchell, County Engr.

Tex., Childress.—City; pave streets. Address The Mayor.

Tex., Cisco.—City Comsn. will pave Spang extension of D Ave. and West 7th St.; 15 blocks; brick.

Tex., Cleburne.—Johnson County Comms. will grade and surface 12 mi. Highway 2-A from Alvarado to Hill County; 122,544 sq. yds. bituminous macadam; 67,000 cu. yds. embankment; 37,560 cu. yds. gravel; R. O. Whitaker, County Engr.

Tex., Daingerfield.—Morris County Comms., Geo. E. Shive, County Judge, will construct 2.69 mi. Highway 35 from Boggy Creek to Titus County; \$33,435.63 and 10.68 mi. Highway 1-A; \$84,787.22; C. W. Burgess, Contr., 710 Haines Ave., Dallas, Tex. (Supersedes recent item.)

Tex., Dallas.—City, F. W. Wozencraft, Mayor, will pave Ewing Ave. from Jefferson to southern city limits of Oak Cliff; \$184,191; Texas Bitulithic Co., Contr.; Geo. F. Fairtrace, City Engr.

Tex., Fort Worth.—Tarrant County Comms., Hugh L. Small, County Judge, will construct 2.8 mi. section of Smithfield Bear Creek road; bids opened; R. V. Glenn, Consult. Engr.

Tex., Fort Worth.—City, W. D. Davis, mayor, will construct 13,452 sq. yds. warrenite-bitulithic pavement on 5-in. concrete base; Texas Bitulithic Co., Contr., Dallas, Texas.

Tex., Franklin.—Robertson County Comms., plan improvement of 18 mi. Highway No. 14; Federal Aid Project No. 168; \$206,927.08; Lamar Acker, County Engr., Nacogdoches, Tex.

Tex., Groesbeck.—Limestone County Comms., plan the construction of 11.9 mi. Highway No. 14; Fred P. Holt, County Engr.

Tex., Henrietta.—City will pave streets; voted \$35,000 bonds. Address The Mayor.

Tex., Linden.—Cass County Comms. will construct roads in Dist. No. 1; vote Dec. 14 on \$60,000 bonds; Hess & Skinner, Engrs., S. W. Life Bldg., Dallas, Tex.

Tex., Longview.—Gregg County Comms. will construct roads; issue \$100,000 bonds.

Tex., Montague.—Montague County Commissioners, W. T. Russell, County Judge, will construct gravel road; 24 mi.; \$220,000 available; Abe Anderson, Contr.; J. Rutledge Hill, County Engr.; both Bowie, Tex. (Lately noted.)

Tex., San Antonio.—City will pave 6 streets; invites bids; Hans Helland, City Engr.

Tex., Sierra Blanca.—Hudspeth County Comms., P. A. Hazzard, County Judge, plan construction of 73 mi. Highway No. 1; \$300,000.

Tex., Stephenville.—John Tarleton Agricultural College, J. Thos. Davis, dean, will construct concrete curbing and sidewalks; \$5000; bids about Jan. 1 (See Machinery Wanted—Paving.)

Tex., Tyler.—Smith County Comms., W. R. Castle, County Judge, will construct 2.7 mi. Highway No. 37; gravel and concrete; \$270,000 available; Healy Construction Co., Contr. (Lately noted.)

Tex., Waco.—McLennan County Comms., J. P. Alexander, County Judge, will improve 5.2 mi. Highway No. 7; State Aid Project No. 145; Mantan Hannah, County Engr.

Tex., Waco.—McLennan County Comms., J. P. Alexander, County Judge, will construct 5.16 mi. bituminous macadam road on Highway No. 7 from Waco to Tehuacana Creek; bids until Dec. 18; Mantan Hannah, County Engr. Lately noted. (See Machinery Wanted—Road Construction.)

Tex., Weatherford.—City Comms. will pave public square; gravel and asphalt.

Va., Danville.—City plans paving of streets; issue \$300,000; proposed. Address The Mayor.

Va., Portsmouth.—Norfolk County Comsn. Roads and Bridges plan permanent road linking Ocean View with naval operating base, Hampton Roads via Mason's Creek; build 2 bridges; \$60,000 to \$70,000.

Va., Portsmouth.—Norfolk County Commrs. will improve Chestnut St. road leading to Cradock; R. B. Preston, Road Engr.

Va., Richmond.—Department Public Works, O. S. Bolling, Director, awarded \$19,299 paving contracts as follows: C. S. Luck, at \$1863, grade Virginia St. from Union to Taylor; Cheatwood & Driscoll, \$1610, gravel Union St.; W. E. Carter, \$3842, granolithic curbing and guttering; F. J. McGuire, \$8988, Willite paving on Linden St. from Park to Cary, and \$2996, Morris St. from Floyd to Grove.

Va., Roanoke.—City Comsn., W. P. Hunter, City Mgr., will pave streets; bids about Mar. 1; issued \$400,000 bonds. (See Machinery Wanted—Paving.)

W. Va., Grafton.—Taylor County Commrs., T. S. Scanlon in charge, will hard surface about 33 mi. roads in city and county; will receive bids on 5 mi. road in spring.

W. Va., Princeton.—Mercer County Commissioners, L. G. Bowling, Clk., will grade 5 mi. road from Bluestone River near Kegley to Spanishburg, 26 ft. wide; Federal-aid Project 44; bids until Dec. 15; E. C. Barton, Engr. Lately noted. (See Machinery Wanted—Road Construction.)

Sewer Construction.

Ark., Booneville.—City will construct sewer and water system; vote on bonds. Address The Mayor.

Fla., Chipley.—Washington County Commissioners will construct sewerage and water-works system; issued \$30,000 bonds.

Fla., Key West.—Johnson Bros., Prop. Oversea Hotel, has let contract to South Florida Constructing & Engineering Co. to install 8-in. terra-cotta sewer pipe costing \$500. (Supersedes recent item.)

Fla., West Palm Beach.—City will construct sewers and drains during next year costing \$150,000. Carl Riddle, City Mgr. (Supersedes recent item.)

Ga., Manchester.—City will construct sewer system; etc \$50,000 bonds. Address The Mayor.

Mo., Cameron.—City let contract to Johnson & Kobette to construct clay sewers.

Okla., Heavener.—City will construct sanitary sewers; issued \$30,000 bonds. Address The Mayor.

Okla., Tulsa.—City will construct storm sewer south side of Riverside Drive Addition; 10x7 ft., reinforced concrete; box 70 ft. long; bids until Dec. 13; Mrs. Frank Seaman, City Auditor. (See Machinery Wanted—Sewer.)

Tenn., Knoxville.—City Comsn. will lay 1500 ft. sewer pipe for Mountain View School.

Tenn., Nashville.—City Comsn. will improve sewer system; issue \$200,000 bonds.

Tex., Abilene.—City, D. Scarborough, Mayor, will construct disposal plant and line costing about \$74,000; W. A. Riney, Engr. (Lately noted to issue \$100,000 bonds.)

Tex., Breckenridge.—City will improve sewer system; voted \$250,000 bonds. Address The Mayor. (Lately noted to vote.)

Tex., Dallas.—City will construct sanitary sewers in Rawlins St. from Douglas to Wy-cliff, costing \$931; in Gilbert St. from Throckmorton to Herschel Sts., costing \$2912, and storm sewer in Bennett St. from San Jacinto to Ross Ave., costing \$5000.

Tex., Wichita Falls.—City, W. D. Kline, Mayor, let contract to C. H. Foley at \$187,917.74 to construct storm sewers; Julian Montgomery, City Engr. (Lately noted.)

Tex., Wichita Falls.—City, Geo. W. Thornburn, Clk., will construct storm sewers; vitrified clay pipe; 55 inlets; 5 manholes; 62 yds. concrete; 1320 sq. yds. paving replacement; 160 ft. piling, etc.; \$187,917.74; C. H. Foley, Contr.; J. Montgomery, City Engr. (Lately noted inviting bids.)

Va., Lynchburg.—City will lay 20-in. sewer pipe line in Church St. Address The Mayor.

Va., Roanoke.—City Comsn. will issue \$150,000 bonds to construct sewers; this is portion of issue previously authorized.

Telephone Systems.

N. C., Raleigh.—Raleigh Telephone Co. will rebuild burned switchboard; loss several thousand dollars.

Tenn., Liguardo.—Liguardo Telephone Co. inceptd. by Edwin Nichols, Sam Burton, L. K. Kirkpatrick.

Tenn., Powells Station.—Powells Telephone Co., capital \$3000. inceptd. by Addison W. Mays, M. E. Cruz, M. R. Cooper.

Tex., Eastland.—Southwestern Telegraph & Telephone Co. will install plant equipment; improve long-distance service. (Previously noted to erect \$100,000 plant.)

Textile Mills.

S. C., Anderson.—Yarns.—Conneross Yarn Mill will increase capital from \$50,000 to \$100,000.

S. C., Whitney.—Shirting and Sheetings.—Whitney Mfg. Co. will increase capital from \$350,000 to \$1,050,000.

Tex., Dallas.—Hosiery.—Texas Hosiery Mills organized with James C. Dobson, Prest. and Gen. Mgr.; J. R. Brown, V.-P.; W. R. Page, Secy.-Treas. (Lately noted inceptd., capital \$100,000.)

Tex., Kenedy.—Cotton Goods.—Ken-Tex Cotton Mfg. Co., capital \$500,000, organized; Robert Burns, Prest.; G. D. Russell, V.-P.; C. A. Carothers, Secy.-Treas.; will build plant to mfr. raw cotton into finished merchantable product.

Water-Works.

Ala., Bessemer.—City will purchase water-works; vote Jan. 17 on \$675,000 bonds. Address The Mayor.

Ala., Birmingham.—City, J. Ellis Brown, Commr., contemplates purchase of water-works.

Ark., Booneville.—City will construct water and sewer system; vote on bonds. Address The Mayor.

Ky., Carrollton.—City, J. R. Guillon, Mayor, will improve water works and electric light plant; bids about Dec. 20; bonds voted.

Fla., Chipley.—Washington County Commissioners will construct water-works and sewerage system; issued \$30,000 bonds.

Fla., Tampa.—Tampa Water Works Co., Chester R. MacFarland, Mgr., will lay 16-in. main across Hillsborough River from Jackson St. to Eagle St. increasing supply for Hyde Park section; costing \$60,000. (Previously noted.)

La., Franklinton.—City will construct water-works system; Xavier A. Kramer, Const. Engr. and Archt., Magnolia, Miss.

Md., Salisbury.—Salisbury Water Co. will lay 6-in. water main on Vine St. from Mitchell to S. Division Sts.

Miss., Agricultural College.—Agricultural College will install additional hydraulic well; Leo C. Link, Supervising Archt.

Miss., Vicksburg.—City contemplates extending water mains from Polk St. and Park Ave. to Fair Grounds. Address The Mayor.

Mo., Plattsburg.—City will construct water-

works plant; E. T. Archer, Engr., Kansas City, Mo.

N. C., Greenville.—City issued \$65,000 bonds for water-works and electric-light system. Address The Mayor.

Okla., Enid.—City, R. T. Williams, Clk., will expend \$320,000 on water-works extension; capacity of new plant 2,500,000 gals.; build boiler-room of brick construction; install 6 motor-driven deep-well pumps; bids until Dec. 15; other proposed work costing \$45,000; Black & Veatch, Engr., Mutual Bldg., Kansas City, Mo. Supersedes recent item. (See Machinery Wanted—Pumps.)

Okla., Tulsa.—City will erect 20,000,000-gal. capacity pumphouse, install 63 mi. pipe line, pumps, etc.; vote on \$5,000,000 bonds; Holway Engineering Co., Engr., 250 Lynch Bldg. (Lately noted.)

Tenn., Manchester.—Town will construct water-works; issue \$45,000 bonds. Address The Mayor.

Tex., Amarillo.—City Light & Water Co. contemplates expending \$75,000 on improvements. (Supersedes previous item.)

Tex., Houston.—City let contract to Chas. S. Basham & Sons to construct addition to North Main St. pumping plant.

Woodworking Plants.

Ala., Tuscaloosa.—Shuttles.—H. D. Dean, Box 262, will erect 35x60-ft. fireproof building costing \$2900; has purchased saws, saw frames, belts, pulleys and lineshafts; daily capacity 1500 to 2000 shuttle blocks; bids until Jan. 1. (Lately noted to erect.)

Ark., Little Rock.—Excelsior.—Little Rock Excelsior Mfg. Co. reorganized with H. A. Goodnight, Prest.; has 6-acre site and will expend \$100,000 for plant and machinery.

Fla., Lake Wales.—Crates.—W. E. Coachman will construct \$500,000 crate and lumber mill.

Miss., Laurel.—Box Shooks.—Baldwin Lumber Co. will install electrically-driven equipment to manufacture box shooks.

Mo., Kansas City.—Silos, etc.—Twinwal Silo Mfg. Co., J. J. Holmes, Prest., 1613 Crystal Ave., will erect factory costing between \$40,000 and \$50,000; first unit nearing completion. (Previously noted.)

N. C., Beard.—Gum Rollers.—National Roller Co., 2634 S. Hobson St., Philadelphia, Pa., will erect plant to mfr. gum rollers for mining operations; J. Boyd Anderson in charge. (Not National Roller Co., New York, as lately noted.)

N. C., Greensboro.—Box Shooks.—Fuller Lumber Co., J. J. Mallonee, Mgr., has building; mfr. box shooks. (See Machinery Wanted—Woodworking Machinery.)

N. C., Greensboro.—Toilet Seats.—Allright Mfg. Co., T. W. Alderman, Secy., will erect 2-story 110x130-ft. building; concrete and tile construction, with floor space of 46,000 sq. ft.; also drykiln, boiler-house and shed; has machinery.

Tenn., Lewisburg.—Hoops.—Van Shapard will rebuild burned hoop factory; loss \$6000.

Tex., Dallas.—Caskets.—Undertakers' Co-operative Casket Mfg. Co., C. F. Weiland, 517 N. Ervay St., in charge; plans to build \$300,000 factory.

Tex., Houston.—Boxes, Crates, etc.—Four-One Box Co., Carroll J. Sherman, Prest.-Mgr., 2324 Maury St., let contract to C. J. Sherman to construct 40x100-ft. building, gable roof, cement floor, costing \$8000; purchased \$12,600 mchy., electrically equipped with separate motors; daily capacity 2000 wire-bound boxes and crates; C. J. and C. H. Sherman, Archts. (Lately noted organized, capital \$40,000.)

W. Va., Morgantown.—Ready-Cut Houses.—B. M. Chaplin & Co. purchased 6-acre site and will establish plant to mfr. ready-cut houses, etc. (See Foundry and Machine Plants.)

Fire Damage.

Ala., Barton.—Lewis Nelson's cotton gin; loss from \$3500 to \$4000.

Ark., Abbott.—W. A. Little's store; loss \$22,000.

Ala., Hollywood.—Stewart & Keller's store; loss \$25,000.

D. C., Washington.—Walter Reed Hospital's two wards; loss \$25,000; Major L. W. Webb, member of staff.

Ga., Athens.—J. J. Shehane's cotton warehouse occupied by Barrett & Co.; loss \$15,000.

Ga., Lagrange.—Geo. Truitt's residence.

La., Dixie.—Mrs. Mary Simmons' residence.

La., Plaquemine.—Antonio Anzeline's syrup mill; loss \$20,000.

La., Oberlin.—Dora Moore's rice warehouse.

Md., Allen.—W. F. Messick & Bros.' canning house and storage warehouse; loss \$50,000.

Md., Baltimore.—Mount Holly Inn, Walbrook; loss \$200,000; W. C. Cahill, owner; Chas. J. Schwarz, Mgr.

Md., Crisfield.—Edgar N. Rigglin's apartment-house and T. Maddrix's residence; loss \$20,000.

Md., Sykesville.—Sykesville Milling Co.'s grain elevator, etc.; loss \$160,000.

Miss., Charleston.—Harvey Thornton Co.'s building; loss \$15,000.

Miss., Derma.—H. E. Long's sawmill.

Miss., Doddsville.—Doddsville Land & Mercantile Co.'s buildings.

Miss., Hattiesburg.—W. D. Roberts' residence, near Eastabuchie.

Miss., Meridian.—M. Roberts' residence and store, 46th Ave. and Hooper St.; loss \$5000.

Miss., Osyka.—Episcopal Church. Address The Rector.

Miss., Scoba.—Mrs. Mary Land's residence.

Mo., Kansas City.—Ever-Ready Garage's building; loss \$4000; 1817 E. 39th St.

N. C., Asheville.—Scott Dillingham's building, Craven St. and Emma Rd.

N. C., Elkin.—Surrey-Wilkes & Yarkin Supply Co.'s building, Main St.; E. F. McNeer's warehouse, occupied by J. W. Glenn.

N. C., Greensboro.—Bennett College dormitory; Frank Trigg, Prest.; loss \$35,000 to \$40,000.

N. C., Mount Olive.—Enterprise Lumber Co.'s planing mill; loss \$100,000.

Okla., Wagoner.—Osage Cotton Co.'s hull-house; loss \$60,000.

S. C., Olanta.—E. H. McFaddin, Mrs. Tal-

bert Worsham and Dr. F. J. Inman's residences.

N. C., Raleigh.—Raleigh Telephone Co.'s switchboard; loss several thousand dollars.

S. C., Orangeburg.—Farmers' Marketing Assn.'s cotton warehouse.

S. C., Walhalla.—Thomas A. Smith's residence, Faculty Hill.

Tenn., Lewisburg.—Van Shapard's hoop factory; loss \$6000.

Tex., Abilene.—W. T. Woody & Clifton's cotton gin; loss \$20,000.

Tex., Alta Loma.—J. Singer's residence; loss \$10,000.

Tex., Alvin.—Edwards Building, occupied in part by D. L. Wilhelm Grocery Co.

Tex., Amarillo.—Wichita Automobile Co.'s building.

Tex., Bay City.—T. J. Hick's residence in Austin Heights.

Tex., College Station.—Agricultural and Mechanical College laboratory; loss \$75,000.

Tex., College.—Texas Agricultural and Mechanical College laboratory building; loss \$75,000.

Tex., Dallas.—Ralph M. Love & Co.'s sweet-potato-curing plant.

Tex., Fort Worth.—Geo. T. Reynolds' barn on farm near Lake Worth; loss \$7000.

Tex., Grandview.—Pitts Gin Co.'s plant; loss several thousand dollars.

Tex., Hamon.—John W. Hamon's residence; loss \$5000.

Tex., Houston.—Southern Pacific Railway's shops; loss \$1,000,000; W. Hood, Chief Engr., San Francisco, Cal.

Tex., Ira.—J. P. Sims' cotton gin.

Tex., Mexia.—Rush Hickman's residence; loss \$6000; First Baptist Church; address The Pastor.

Tex., Nixon.—C. S. Magee's residence.

Tex., Stockdale.—Stockdale Cotton Seed Oil Mill Co.'s main building; loss \$50,000.

Tex., Sunset.—Sunset Hotel; loss \$10,000.

Tex., Victoria.—Otto Shults' residence, between Victoria and Fannin.

Tex., Wichita Falls.—Bluff Hotel; loss \$10,000.

Tex., Wichita Falls.—Maxwell Hardware Co.'s and Jones Grain Co.'s warehouses.

Va., Appalachia.—Wm. Boatwright's building; Wakin & Zinc's store; J. M. Barker's restaurant.

Va., Marion.—Mrs. Helen M. De Vol's residence.

Va., Pulaski.—Mrs. V. F. Southern's building, occupied by Young & Co.

W. Va., Martinsburg.—Potomac Light & Power Co.'s switchboard; loss between \$15,000 and \$20,000.

ing, Pennsylvania and Mondawmin Aves.; 3 stories; 47x120 ft.; brick; slag roof; concrete and hardwood floors; heating plant, \$4000; lighting plant, \$4000; metal ceilings; interior tile; ventilators; stores on first floor; Stanislaus Russell, Archt., 11 E. Lexington St.

Mo., Kansas City.—C. R. Baum, 1022 Wyandotte St., will erect \$12,000 apartment-house lately noted; 3 stories; 3 suites; frame and stucco; 20x42 ft.; Carey roofing; oak and concrete floors; hot-water heat; construction by owner. (See Machinery Wanted—Electric Fixtures; Ranges; Kitchen Cabinets; Plumbing; Radiator Valves.)

Okla., Muskogee.—Manhattan Construction Co., 906 Phoenix Bldg., will erect \$125,000 apartment building, N. 6th St.; 3 stories; 36 suites; fireproof; reinforced concrete, brick and stone; tar and gravel roof; oak floors; tile terrace; 100-ft. front; vacuum heat, \$25,000; plans and construction by owner. (Lately noted.)

Okla., Tulsa.—McDonald & Nelson Investment Co., Central Natl. Bank Bldg., will erect \$15,000 apartment-house, 15th and Awasso Sts.; 1 story and basement; 100x30 ft.; frame; shingle roof; plans and construction by owner.

Tex., San Antonio.—J. H. Lapham will erect 2 eight-room apartments, River Ave.; \$18,000.

Mo., St. Louis.—Saum & Saum, 625 Chestnut St., will erect \$200,000 apartment building, 5600 Delmar Ave.; 42 suites; 4 stories; brick; fireproof; plans by owner.

W. Va., Huntington.—Joseph Cohen plans to erect apartment and business building, 12th St.

Association and Fraternal.

Ky., Stone.—Ira Coal Co. will erect Y. M. C. A. (See Dwellings.)

N. C., Charlotte.—Oasis Temple, Julian Price, Potentate, appointed Building Comm., John M. Scott, Chrmn., to secure tentative plans for Shrine Temple to cost not less than \$300,000, and report at next meeting of Shrine, 12 months hence.

Okla., Oklahoma City.—Benevolent and Protective Order of Elks, C. D. Wallace, Exalted Ruler, plans to erect \$500,000 building and remodel present lodge; 5 or 6 stories; 150 to 200 dormitory rooms, gymnasium, swimming pool, bowling alleys, roof garden, etc. (Previously noted.)

W. Va., Wheeling.—Mystic Lodge No. 24, Knights of Pythias, will erect \$100,000 building, National Rd., Elm Grove; 54x120 ft.; 3 stories; brick, stone and terra-cotta; 2 stores on first floor; auditorium, second floor; club-rooms, etc., third; gymnasium in basement.

W. Va., Wheeling.—Mystic Pythian Assn., J. F. Warden, 66 S. Main St., Elm Grove, Wheeling, interested, considering erecting \$60,000 building; 44x80 ft.; brick and stone; composition roof; hardwood floors; probably steam heat; electric lights; construction probably not before spring. (Lately noted.)

Bank and Office.

Ala., Rogersville.—Rogersville Bank will erect concrete building.

Fla., Okeechobee.—People's Bank, G. B. Skipper, Prest., will erect building.

Tex., Mercedes.—First Natl. Bank, John T. Hackney, Prest., will erect \$25,000 building; 2 stories; H. F. Kuehne, Archt., Littlefield Bldg., Austin. (Lately noted.)

N. C., Statesville.—J. M. Deaton will convert store building, West Broad and Meeting Sts., into offices; metal ceilings; wire glass; vault light, etc.

Tex., Panhandle.—First State Bank plans to erect building.

BUILDING NEWS

BUILDINGS PROPOSED

Apartment-Houses.

Fla., Lake Worth.—Chas. W. Waterman will erect two 4-suite apartment-houses; \$18,000; frame; 30x50 ft.; composition roof; yellow-pine floors; city lights; plans and construction by owner. (Lately noted.)

Fla., Miami.—C. F. Goodman will erect \$75,000 apartment-house, Biscayne Drive and Flagler St.; 3 stories; 30 suites; 64x140 ft.; brick and concrete; built-up frame roof; pine floors; Edw. A. Nolan, Archt.; construction by owner. (Lately noted.)

Fla., Sarasota.—John Savarese is erecting apartment-house; concrete blocks and brick.

Fla., Seabreeze.—Mayor I. W. Ramsey will erect 5-room apartment over garage, Grandview Ave.

Fla., Tampa.—Frederick Mayes, R. 5, Box 17, will erect \$20,000 apartment-house; 62x50 ft.; frame; hardwood floors; electric lights; ornamental terra-cotta; metal doors; mail chutes; ventilators; steel sash and trim; plans and construction by owner. (Lately noted.)

Ga., Columbus.—J. H. Dimon, W. W. Rainey and others will erect \$150,000 apartment building.

Md., Baltimore.—A. J. Dietrich, Pleasant and Davis Sts., will improve apartment build-

Churches.

Ala., Birmingham.—Good Shepherd Episcopal Mission, Mrs. W. B. McDonald, Treas., 7428 First Ave., will erect \$7500 building; 40x25 ft.; frame; composition shingle roof; pine floors; P. S. Mewhinney, Archt., Woodward Bldg. (Lately noted.)

Ark., Fort Smith.—Mallalieu M. E. Church, Rev. B. F. Neal, Pastor, will erect \$40,000 building.

Fla., Bradentown.—Methodist Church plans to erect building. Address The Pastor.

Fla., Elfers.—Baptist Church, Rev. A. E. Gammage, Pastor, will erect \$10,000 building; frame; seat 350.

Fla., Plant City.—Baptist Church, J. E. Knight, Chrmn. Bldg. Comm., will receive bids until Jan. 5 to erect brick building; plans and specifications from W. C. Wells, at Wells & Sons Co.'s store; H. L. Cain, Archt., Richmond, Va. (Lately noted.)

Ga., Valdosta.—Seventh-Day Adventist Church, O. G. Carnes, Pastor, will erect building.

Ky., McDowell.—Elkhorn Gas Coal Mining Co. will erect church. (See Dwellings.)

Ky., Stone.—Ira Coal Co. will erect church. (See Dwellings.)

Miss., McComb City.—Presbyterian Church, J. J. Misto, Chrmn. Comm., will erect \$60,000 building; brick and stone; oak floors; steam heat; electric lights; Kramer & Lindsley, Archts., Jackson; bids opened about Feb. 1. (Lately noted.)

Miss., Poplar Springs.—Methodist Church will erect building. Address The Pastor.

N. C., Asheville.—Central Methodist Church, Frank Weaver, Chrmn. Comm.; plans to erect addition to building.

N. C., Mooresville.—Broad Street M. E. Church South, Rev. J. Henry Capps, Pastor, 39 McLelland Ave., is erecting temporary frame tabernacle; 32x50 ft.; plans to erect \$18,000 church in spring; auditorium 40x70 ft.; 6 Sunday-school rooms; slate roof; hardwood and concrete floors; hot-air heat; electric lights; hollow fireproof tile; metal ceilings; plaster board; ornamental terra-cotta; safes; interior tile; metal doors; wood block floors; rolling partitions; wire glass; vault lights; ventilators; steel and sash trim. (Lately noted.)

Tenn., Bristol.—A. D. Reynolds, 37 Fourth St., is Chrmn. of Bldg. Comm. to erect church; dark sand stone, white or light marble or stone cast trim. (See Machinery Wanted—Building Material; Trim.)

Tenn., Chattanooga.—Centenary M. E. Church, South, J. J. Wall, Secy. Bldg. Comm., 16 E. 17th St., will receive bids until Dec. 23 to erect building, McCallia Ave. and Lindsay St. (Previously noted.)

Tenn., St. Elmo.—Methodist Church will erect \$40,000 building; brick, stone trim; auditorium to seat 700; R. H. Hunt, Archt., Chattanooga.

Tenn., Tyner.—Methodist Church will erect \$20,000 building; brick, stone trim; R. H. Hunt, Archt., Chattanooga.

Tex., Dallas.—First Unitarian Church, S. Ervay and St. Louis Sts., will expend \$10,000 to improve building. Address The Pastor.

Tex., Fort Worth.—Kentucky Ave. Baptist Church, Rev. J. S. Bates, Pastor, will erect \$75,000 building, Evans Ave. and Elmwood St.

Tex., Panhandle.—Baptist Church contemplates erecting building. Address The Pastor.

Tex., San Antonio.—Mexican Mission M. E. Church South will erect \$55,000 church and parsonage, Pecos and San Fernando Sts.; reinforced concrete and brick; stone trim; 1 story and basement; Beverly W. Spillman, Archt.

Va., Richmond.—Grove Avenue Baptist Church, Rev. Dr. Len G. Broughton, Pastor, will enlarge auditorium and Sunday-school building.

City and County.

Ala., Montgomery.—Market, etc.—City, C. B. Smith, Clk., will issue \$95,000 street, school and market house bonds.

Md., Baltimore.—Board of Park Commrs., J. V. Kelly, Secy., will complete pavilion, Clifton Park; brick, terra-cotta, frame, iron and marble; slate roof; tile and concrete floors; hollow fireproof tile; interior tile; Josias Pennington, Archt., Professional Bldg.; Frank Herbert, 1109 Madison Ave., low bidder at \$48,846. (Lately noted.)

Mo., Marshall.—Community Building.—Commercial Club, Country Club and County Court are promoting erection of \$50,000 community building.

Tex., Panhandle.—City Hall, etc.—City, M. B. Welsh, Mayor; contemplates erecting city hall and community-house.

Va., Portsmouth.—Municipal Building.—City, J. P. Jervy, City Mgr., will erect \$80,000 addition to municipal building; 100x55 ft.; plans by Mr. Parker, Building Inspector.

Va., Roanoke.—Market-house, etc.—City offered for sale \$650,000 bonds, including \$100,000 market bonds. Address The Mayor.

Courthouses.

Tex., Seminole.—Gaines County Commrs.' Court, T. O. Stark, County Judge; receives bids until Dec. 13 to complete courthouse and jail building; \$46,000; 3 stories and basement; 50x50 ft.; fireproof; concrete and brick; composition gravel roof; concrete floors; steam heat; hollow fireproof tile; plaster-board; interior tile; metal doors; vaults; wire-glass; Sanguinet & Staats, Archts., First National Bank Bldg., Fort Worth. (Lately noted.)

Dwellings.

Ark., Fort Smith.—Dr. P. A. Riddler will erect \$7500 residence; 1 story and basement; 34x63 ft.; stucco; W. H. Saylor & Co., Archts., 306 Mutual Bldg., Kansas City, Mo.; day labor.

D. C., Washington.—H. R. Howenstein Co., 1314 F St. N. W., will erect 6 dwellings, 11 to 21 Channing St.; 7 rooms; lots 20x40 ft.

D. C., Washington.—Jos. H. Humpherson will erect \$6000 residence, 1306 Hamlin St. N. W.

D. C., Washington.—Jas. E. Cooper, Commercial Bank Bldg., is preparing plans for \$100,000 residence, Prince George's County, Md.; 29x200 ft.; terra-cotta, tile and stucco; slate roof (English type Tudor); oak, marble, tile and concrete floors; vapor heat; electric lights; hollow fireproof tile; safes; interior tile; construct roads, install water-works, sewerage system, etc.; construction by architect and owner. (See Machinery Wanted—Building Material; Heating Plant; Lighting Plant; Plumbing; Decorations; Draperies; Furniture.)

Fla., Clermont.—Board of Trade is promoting erection of residences.

Fla., Lake Worth.—F. H. Smith will erect 3 bungalows.

Fla., Miami.—L. N. McGhan will erect \$5000 residence, Miramar; 2 stories; concrete and stucco; 28x32 ft.

Fla., Miami.—J. R. Tatum, Ralph J. Powers, R. F. Cook and H. S. Ward are reported to erect residences.

Fla., Miami.—Hugh M. Anderson, J. M. Markley and R. B. Leonard will erect 34 residences.

Fla., Miami.—William Witcher will erect 15 bungalows.

Fla., St. Petersburg.—Victory Land Co. will erect 12 \$15,000 dwellings in connection with development of Big Bayou district; plans later to erect additional residences to cost \$15,000 to \$50,000 each; Moorish architecture; W. R. Carpenter, Archt., Pittsburgh, Pa.

Fla., Tampa.—Thos. G. Clayton will erect \$7000 dwelling, 715 N. A St.

Fla., Tampa.—William Shields will erect \$5500 dwelling, 708 S. Dakota Ave.

Fla., Tampa.—J. R. Brinkley will erect \$6000 frame residence, 2004 Jetton Ave.

Fla., Tarpon Springs.—Dodge Bros., Box 526, will erect 20 bungalows; \$60,000; frame; 26x36 ft.; asphalt shingle roof; hardwood, yellow pine floors; fireplaces; plans and construction by owners. (Lately noted.)

La., Lake Charles.—Knapp & East will erect 24 dwellings in connection with development of property; \$5000 to \$8000 each; 5 to 10 rooms; brick, frame, tile, concrete and sawdust blocks; tile, slate and wood shingle roofs; wood floors; plans and construction by owner. (Lately noted.)

Fla., Winter Haven.—Fred Burton will erect residence.

Ky., Beaver Creek.—Clabron-Elkhorn Coal Co., Paintsville, will erect 20 miners houses.

Ky., Calvin.—Crech-Duffy Coal Co. will erect 10 miners houses and coal tipple; contract by Dec. 20.

Md., Baltimore.—Geo. S. Wicks 1904 Boone St., will erect \$6000 residence, 3202 Elgin Ave.; 2 stories; frame; 26x46 ft.; slate roof; steam heat; H. E. Shelley, Archt.; construction by owner.

Ky., Collins.—Big Shelby Coal Co. will erect 15 miners' houses, school and coal tipple.

Ky., McDowell.—Elkhorn Gas Coal Mining Co. will erect 12 miners' houses, coal tipple, church and school.

Ky., Millstone.—Elkhorn Jr. Coal Co. will construct 12 miners' houses; also tipple.

Ky., Stone.—Ira Coal Co. will erect 30 miners' houses, coal tipple, church, school and Y. M. C. A.; contracts at once.

Md., Baltimore.—G. B. Lohmuller, 3001 Greenmount Ave., will erect 2 bungalows, Rosedale Ave. nr. Harford Rd.; \$6500; 26x28 ft.; frame; 1½ stories; asbestos shingle roof; pine floors; pipeless furnace heat, \$250; plans and construction by owner. (Lately noted.)

Md., Baltimore.—Fank O. Singer, Jr., Equitable Bldg., will erect 2 frame dwellings, 2808-10 Loudon Ave.; \$14,000; 2½ stories; 30x37.2 ft.; steam heat; W. B. Gerwig, Archt., 600 Equitable Bldg.; construction by owner. (Lately noted.)

Miss., Hattiesburg.—Joe Denton will erect \$5000 residence.

Miss., Burbank.—G. E. Burbank will erect residence.

Mo., Kansas City.—J. C. Nichols Investment Co., 900 Commerce Bldg., will erect \$20,000 residence, 1225 W. 58th St.; 2 stories and basement; 32x46 ft.; frame; shingle roof; will also erect 2 dwellings, 617 W. 63d St. and 630 Greenway Ter.; \$8000; 2 stories and basement; 20x36 ft.; frame and stucco; shingle roof; plans and construction by owner.

Mo., Kansas City.—Gus Agee, 406 Commerce Bldg., will erect 3 dwellings, 321-25-27 N. Lawn St.; \$12,000; 2 stories and basement; 21x23 ft.; stucco and frame; shingle roof; plans and construction by owner.

Mo., Kansas City.—T. E. Walsh, 2915 E. 33d St., will erect \$6000 residence, 2853 Victor St.; 2 stories and basement; 24x34 ft.; stucco; shingle roof; plans by owner; day labor.

N. C., Charlotte.—Myers Park Homes Co., V. J. Guthery, Prest., Realty Bldg., will erect number of dwellings in Myers Park; \$5000 to

\$20,000 each; 6 to 10 rooms; frame and brick; oak and pine floors; hot-air heat; electric lights; hollow fireproof tile; plaster board; interior tile; wood block floors; plans to erect at rate of one dwelling per week next year; plans and construction by owner. (Lately noted.)

N. C., Charlotte.—Myers Park Homes Co., V. J. Guthrey, Pres.; capital \$225,000; purchased 80 acres of land in Myers Park and plans to erect number of dwellings; 6 residences now under construction. (Lately noted.)

Okla., Okmulgee.—Chamber of Commerce, W. W. Jenkins, Pres., is promoting organization of housing corporation to erect number of dwellings.

Okla., Sapulpa.—R. T. Williams will erect \$5000 residence, Lee and Mission Sts.

Mo., St. Louis.—Frances Investment Co., 614 Fullerton Bldg., will erect 2 dwellings, Venita Park; \$8000; 2 stories; 19.6x22.6 ft.; tile and stucco; Nolte & Nauman, Archts., Fullerton Bldg.

Mo., St. Louis.—E. Tuchschildt, Wainwright Bldg., is preparing plans for \$25,000 residence, Forsythe Blvd. and Pennsylvania Ave.; 2 stories; 40x42 ft.; brick.

Tenn., Kingsport.—Improvement Co., J. Fred Johnson, Pres., will erect 38 dwellings; \$120,000; 1 and 2 stories; 30x30 ft.; frame; Litchfield & Rogers, Archts., 477 Fifth Ave., New York; construction by owner.

Tenn., Knoxville.—John Rogers will erect \$9000 residence; 2 stories; brick veneer; M. E. Parmelee, Archt., Gay St.; day work.

Tenn., Knoxville.—Industrial Home Corp., J. L. Burdette, Secy.-Treas., will erect number of dwellings; \$2000 to \$3000 each; 4 and 5 rooms; frame; asphalt shingle roofs; pine floors; fireplaces; city electric lights; bids opened Jan. 1. (Lately noted.)

Tex., Austin.—L. C. Banks, Webberville, is rebuilding burned residence, 2104 Tom Green St.

Tex., Dallas.—A. O. Krause will erect \$5000 frame cottage, 5302 Junius St.; 6 rooms.

Tex., Dallas.—Mrs. Lillian Bellew will erect \$6500 frame cottage, 5803 Richmond St.; 6 rooms.

Tex., Dallas.—W. A. Thomas will erect \$5000 brick-veneer cottage, 4403 Avondale St.; 5 rooms.

Tex., El Paso.—J. Amstaller will erect \$12,000 residence and garage, block 214, Alexander addition; 2 stories; brick.

Tex., San Antonio.—C. H. Chadwick will erect \$5000 six-room dwelling, French Pl.

Tex., San Antonio.—Ollie Hanzel will erect \$10,000 five-room residence, Bushnell St.

Va., Norfolk.—Armstrong Presbyterian Church, Berkley, will erect manse, Hardy Ave. Address The Pastor.

W. Va., Clarksburg.—Frank Nicholas will erect \$10,000 residence, Walnut and Haymond Sts.; 2 stories and basement; brick; 15 rooms.

W. Va., Princeton.—J. H. Gadd will erect \$6500 brick bungalow. (Lately noted.)

Government and State.

Miss., Jackson.—State Institutions.—State Bond Improvement Comsn. will expend proceeds of \$5,000,000 bond issue for various State Institutions, including \$500,000 for general repairs; \$600,000 for new power plants and repairs to existing plants; \$3,500,000 for new buildings; work proceeding under direction of Theodore C. Link, Archt., Carlton Bldg., St. Louis.

Miss., Vicksburg.—Hospital, etc.—State, Gen. E. C. Scales, Adj.-Gen., Jackson, will receive bids until Dec. 22 for furnishing material and

erecting officers' headquarters, hospital, battalion mess, bath and toilet and storehouse building at State Rifle Range, Vicksburg; plans and specifications at Adjutant-General's office.

Hospitals, Sanitariums, Etc.

Ala., Selma.—General Committee, Dr. Moseley, Chrmn., Pine Apple, Ala.; Ernest Lamar, Selma, and others, will erect State Baptist Hospital; \$350,000.

D. C., Washington.—War Dept. will erect Army Medical School at Walter Reed Hospital; plans being prepared; bids probably in spring; F. B. Wheaton, Major Q. M. C., officer in charge of Building Division, Construction Service.

Ga., Savannah.—Chatham-Savannah Assn., G. I. Taggart interested, will erect sanitarium; main building and group of huts; plans prepared by Lynn Drummond, Archt., and W. H. Artley, Contr. (Lately noted.)

Md., Baltimore.—Union Memorial Hospital, Samuel C. Rowland, Chrmn. Comm., Calvert Bldg., will erect hospital buildings; structures to occupy block on 33d St., between Calvert St. and Guilford Ave.; main entrance in central building, about 30 ft. back of building line, approached by driveway and steps; first floor for offices, library and boardroom, etc.; bedrooms and baths for internes and suite for resident physician at east end of first floor; superintendent's suite on opposite side; dining rooms in central building; 2 elevators in main structure; Jos. Evans Sperry, Archt., Calvert Bldg.; bids not invited pending settled conditions in material market. (Previously noted.)

Md., Baltimore.—Johns Hopkins Hospital, Dr. Winford H. Smith, Supt., has tentative plans for enlargement, reconstruction and erection of buildings as follows: women's clinic, \$400,000, for which plans are prepared; dispensary building, \$1,714,000; extension of heating and power plant, or new plant, \$100,000 to \$500,000; addition to Nurses' Home, \$500,000; teaching building for School of Nursing, \$250,000; convalescent branch, \$250,000; medical clinic for men and women, \$500,000; addition to service building to provide dining-rooms, sleeping-rooms and kitchen accommodations, \$200,000; surgical clinic, \$500,000; library building, \$350,000; work to begin as soon as feasible on \$600,000 building for pathological department; women's clinic and library buildings. (Women's clinic lately noted.)

Mo., Kansas City.—Wesley Hospital, Dr. J. A. Robertson, Supt., will remodel building, 11th and Harrison Sts.; 5 stories and basement; 45x115 ft.; Keene & Simpson, Archts., 400 Reliance Bldg.

Va., Danville.—Hilltop Anti-Tuberculosis Hospital, Frank Talbott and E. Walton, Trustees, will erect \$50,000 building, Yanceyville Rd.; 1 and 2 stories; brick and frame; Heard & Chesterman, Archts., Arcade Bldg.

Va., Roanoke.—Roanoke Hospital Assn. plans to erect \$150,000 fireproof unit to hospital.

Hotels.

Ala., Sheffield.—Neff Hotel Co. will erect brick building to replace present structure.

Fla., West Haven.—Great Food Producing Corp.; \$100,000 capital; W. D. Hart, Pres.; E. W. Drake, V.-P.; both Atlanta, Ga.; will develop 5000 acres of land for colony; plans to erect hotel; date of beginning construction indefinite.

Mo., St. Louis.—Jefferson Hotel Corp., Lyman T. Hays, Gen. Mgr., receives bids through T. P. Barnett, Archt., Arcade Bldg., until Jan. 15 to erect 12-story addition, 12th and Locust Sts.; 50x200 ft.; reinforced concrete, brick and steel; reinforced concrete

floors; electric lights; electric elevator. (Previously noted.)

Okla., Miami.—Hiram McBee will erect hotel; 3 stories and basement; 60x120 ft.; brick and stone; composition roof; Bert Overton, Archt.

Tex., El Paso.—W. H. Gilmartin will erect 2-story stone hotel in A. A. Donnell addition; 60x110 ft.; 57 rooms; \$60,000.

Tex., San Antonio.—Hot Wells Mineral Bath & Hotel Co. will remodel building and improve grounds; build dam across San Antonio River, provide artificial lake of 8.6 acres for boating and swimming and for developing 140 H. P.

Tex., Glen Rose.—Durwood McDonald, Fort Worth, will erect \$200,000 hotel; 350 rooms; tile blocks; electric lights.

Va., Cape Charles.—Eastern Shore Hotel Corp. Incptd.; W. B. Wilson, Pres.; R. A. Parson, V.-P.; J. R. Parson, Secy.-Treas.

Miscellaneous.

Ark., Hot Springs.—Bathhouse, etc.—Supreme Lodge, Woodmen of Union, is having plans revised and will open bids about Dec. 30 to erect bathhouse and sanitarium; 100x120 ft.; brick; terra-cotta trim; interior tile; composition roof; reinforced concrete floors; steam heat. Address W. T. Bailey, Archt., 358 Beale Ave., Memphis, Tenn. (Previously noted.)

Fla., St. Petersburg.—Undertaking Establishment.—Wilhelm Undertaking Co., 644 Central Ave., deferred erection of building until spring or summer. (Lately noted.)

Ky., Louisville.—Assembly.—Standard Sanitary Mfg. Co., W. A. Wunderlich, Mgr., 319 W. Main St., will erect assembly hall in Highland Park; 1 story; 50x100 ft.; brick walls; steel roof trusses; \$20,000; owner taking bids; Joseph & Joseph, Archts., Atherton Bldg.

Mo., St. Louis.—Home.—Jewish Shelter Home, David Sommers, Pres., 2236 Tower Grove Ave., will erect cottage.

Okla., El Reno.—Community-house.—Rev. John B. Magee is promoting erection of community-house.

Okla., Tulsa.—Clubhouse.—Petroleum Club of Tulsa, 6th St. and Detroit Ave., reported to erect structure.

Tenn., Nashville.—Stadium.—Vanderbilt Athletic Assn. will construct concrete stadium; \$100,000.

Tex., Houston.—Clubhouse.—Houston Baseball Club, Jno. H. Crooker, Pres., will erect clubhouse, West End Park; 2 stories; 3 showers on first floor; dressing and locker-rooms on second; provide for 1000 additional seats in main grandstand; \$7000.

Tex., Mexia.—Housing.—Humphrey Mexia Co. will erect field buildings to house employees; also build water line from Mexia.

Va., Galax.—Fair.—Galax Fair Assn., J. P. Carico, Pres., will erect display agricultural exhibit building; repair present structures; rebuild fences; install electric lights.

Va., Rappahannock.—Clubhouse.—Rappahannock Country Club, W. P. Slaughter, Pres., organized; \$10,000 capital; erect clubhouse.

Railway Stations, Sheds, Etc.

Ala., Andalusia.—Louisville & Nashville R. R., W. H. Courtenay, Ch. Engr., Louisville, will erect passenger station and enlarge freight depot.

Ky., Covington.—Chesapeake & Ohio R. R., F. I. Cabell, Ch. Engr., Richmond, Va., will erect passenger station.

Schools.

Ala., Dothan.—Board of Education plans to issue \$100,000 bonds to erect school in Ward Two, 2 frame buildings for colored schools,

provide heating system for Howell school and other improvements.

Ala., Littleton.—Jefferson County Board of Education, Dr. N. R. Baker, Supt., Birmingham, will consolidate Littleton and Banner schools and erect building.

Ala., Montgomery.—City, C. B. Smith, Clk., will issue bonds for schools, etc. (See City and County.)

D. C., Washington.—Board of Comms., 508 District Bldg., will receive bids until Dec. 17 to erect 8-room addition to Takoma School No. 118, Piney Branch, Rd. and Dahlia St.; plans and specifications from Chief Clk., Engineer Dept., 427 District Bldg. (Previously noted.)

Fla., Lake Worth.—Board of Public Instruction will erect \$40,000 high school; probably cement block or tile; contract let about Feb. 1; F. H. Trimble, Archt., Orlando. Address D. W. Boydston, Lake Worth. (Lately noted.)

Ga., Cuthbert.—City, Eugene Sharley, Clk., voted \$75,000 school bonds. (Previously noted.)

Ga., Kirkwood.—Town, T. J. Bryan, Mayor, will erect \$45,000 school; 14 rooms; brick and hollow fireproof tile; ornamental terra-cotta; interior tile; composition roof; cement floors; metal ceilings; rolling partitions; ventilators; steam heat; J. Frank Downing, Archt., Atlanta. Address O. O. Ray, Town Clk. (Lately noted.)

Ga., Valdosta.—Board of Education will erect high school and building for colored pupils.

Ky., Lexington.—University of Kentucky, Frank L. McVey, Prest., will receive bids until Dec. 20 to erect dormitory; separate bids for heating and electric installation; Coolidge & Shattuck, Archts., 122 Ames Bldg., Boston, Mass.

Ky., Collins.—Big Shelby Coal Co. will erect school. (See Dwellings.)

Ky., McDowell.—Elkhorn Gas Coal Mining Co. will erect school. (See Dwellings.)

Ky., Owensboro.—City votes Jan. 22 on \$300,000 school bonds; J. J. Sweeney, Prest. Board of Education. (Lately noted.)

Ky., Stone.—Ira Coal Co. will erect school. (See Dwellings.)

La., Fairview.—Allen Parish Board of Public Instruction, Oberlin, will erect high school; 2 stories; 4 classrooms, science laboratory, principal's office and auditorium to seat 300; I. C. Carter, Archt., Lake Charles.

La., Marion.—School Board will erect \$50,000 building; bonds voted; contract in Jan.; J. W. Smith, Archt., Monroe. (Previously noted.)

La., Pioneer.—West Carroll Parish voted \$35,000 bonds to erect school in Eighth Dist. Address Parish School Board, Oak Grove.

Md., Baltimore.—Board of Awards, Wm. F. Broening, Prest., will receive bids until Dec. 15 at office Richard Gwinn, City Register, to erect School No. 78, Latrobe Park; 72x272 ft. with 1-story annex 50x240 ft.; fireproof; concrete and hardwood floors; ornamental terra-cotta; metal ceilings; metal doors; wire-glass; steel sash and trim; ventilators; drawings and specifications at office J. F. Crowther, Inspector of Buildings; Otto G. Simonson, Archt., Maryland Casualty Tower. (Lately noted.)

Md., Prince Frederick.—Calvert County Board of Education, Geo. D. Turner, Chrmn. Bldg. Comm., will receive bids Jan. 15 to erect high school; 2 stories; 54x88 ft.; frame; \$75,000; plans and specifications at offices Mr. Turner and Walter M. Gieske, Archts., Gunter Bldg., Baltimore. (Previously noted.)

Md., Sparrows Point.—Baltimore County Board of Education, Towson, will erect school; 24 rooms; Smith & May, Archts.,

763 Calvert Bldg., Baltimore. (Previously noted.)

Mo., Greenfield.—Greenfield School Dist. voted \$40,000 bonds to erect high school. Address Dist. School Trustees.

Mo., Pilot Grove.—Board of Education, O. Kistemacher, Secy., is having plans revised for \$75,000 high and grade school; 2 stories and basement; 50x70 ft.; brick; stone trim; H. R. Primmer, Archt., Nevada, Mo.; W. R. Henry, Structural Engr., Reliance Bldg., Kansas City. (Previously noted.)

N. C., Greensboro.—State College for Women will erect alumnae building; also erecting dormitory and addition to dining hall.

N. C., High Point.—Guilford County Board of Comms., W. C. Tucker, Chrmn., Greensboro, ordered election Jan. 18 on bonds not to exceed \$600,000 to erect Central High School.

N. C., Canton.—Canton Graded School Dist., H. D. Secrest, Secy., votes Dec. 14 on \$150,000 bonds; plans to erect \$85,000 school. (Lately noted.)

N. Y., Buffalo.—Board of Education, Jas. Storer, Secy., 1401 Telephone Bldg., will receive bids until Jan. 19 to erect following schools: Primary building, Dist. No. 21; addition to elementary school, Dist. No. 21; elementary building, Dist. No. 9; elementary building, Dist. No. 1; addition to elementary school No. 60; intermediate schools Nos. 6, 2, 7, 8, 9, 11 and 12; instruction to bidders and plans and specifications for first 6 may be procured from office Associated Bureau Architects, Inc., Room No. 40, 232 Delaware Ave.; plans and specifications for remaining intermediate schools may be procured from same office on and after Dec. 15.

S. C., Rock Hill.—Board of Education will erect \$75,000 Ebenezer Grammar School; 7 classrooms, library, principal's office and teachers' restroom; A. D. Gilchrist, Archt.

Tenn., Alcoa.—Board of Education will erect Springbrook School; 3 units; 26 rooms; accommodate 1000 pupils; 1 story; bungalow type; brick and cement; fireproof.

Tenn., Memphis.—County Board of Education will expend \$65,000 to improve and erect additions to Treadwell School; Mahan & Broadwell, Archts.; G. R. Helsley, Chrmn. Building Comm.

Tex., Canadian.—Board of Education, W. A. Stigler, Supt., plans to issue \$43,000 bonds to erect ward school.

Tex., Cisco.—City voted \$60,000 school bonds. Address The Mayor. (Lately noted.)

Tex., Fort Worth.—Board of School Trustees will erect 16-room school at Riverside; \$50,000; taking bids.

Tex., San Antonio.—Hebrew Institute will erect \$20,000 building on Quincy St. between Main and Richmond Aves.; brick, hollow tile and concrete; faced with red brick; mosaic tile cornices; art glass windows; 4 classrooms, library, etc.; gas steam heat; Malcolm G. Simons, Archt. (Previously noted.)

Va., Bristol.—Virginia Intermont College, H. G. Noffsinger, Prest., receives bids until Jan. 3 to erect 4-story brick dormitory; 40x120 ft.; hardwood and concrete floors; metal ceilings; wire-glass; steel sash and trim; plans and specifications at office C. B. Kearfott, Archt., Galloway Bldg., Bristol, Tenn. (Lately noted.)

Va., Schoolfield.—Riverside & Dan River Cotton Mills, H. R. Fitzgerald, Prest., will erect 3 grade schools; 1 and 2 stories; frame and stucco; E. R. James, Archt., First National Bank Bldg., Danville, will revise plans and take bids. (Previously noted.)

Va., Winchester.—Handley Board of Trustees, R. Gray Williams, Prest., will erect \$500,000 school; brick, steel and concrete; slate and tar and gravel roof; wood and tile floors;

W. R. McCormick, Archt., Board of Education, Cleveland, O. (Previously noted.)

W. Va., Kenova.—Ceredo Independent School Dist. will vote Dec. 11 on \$126,400 bonds to erect high school. Address County Board of Education, Wayne.

W. Va., Williamson.—City plans to issue \$250,000 school bonds. Address Board of Education.

Stores.

Ala., Birmingham.—Geo. A. Harmel & Co. will repair building; \$25,000.

D. C., Washington.—E. H. Mosher, Munsey Bldg., will erect 4 stores, Third St. and Massachusetts Ave. N. E.; 1 story; \$25,000; H. H. Warwick, Archt., Munsey Bldg.; construction by owner.

Fla., Daytona.—Alex Samra, Daytona Dairy Lunch, will erect addition to building on North Orange Ave.; 18x60 ft.; brick.

Fla., Hastings.—G. W. Waller will erect building; 25x100 ft.; steel with concrete-block front; fireproof roof and wire-glass windows.

Fla., Jacksonville.—A. M. Crabtree will erect \$5000 addition to building.

Mo., Springfield.—Dr. J. Wilkerson, 927 N. Jefferson St., will erect \$20,000 store; 2 stories and basement; 40x60 ft.; brick; stone trim; composition roof; Geo. F. Reed, Archt., 423 Woodruff Bldg.

Tex., San Antonio.—J. C. Dielman will erect brick store, El Paso St.; \$10,000.

Tex., San Antonio.—H. Groom will remodel store front, Houston St.; \$5000.

Tex., San Antonio.—Paul J. Hertling will remodel and erect addition to building; \$5000.

Theaters.

Fla., Daytona.—H. T. Titus contemplates erection of picture theater on Orange Ave.

Fla., Miami.—August Geiger is preparing plans for Lincoln road theater, Miami Beach; 180x140 ft.; Spanish style; stucco and tile; seating capacity 1000.

Md., Baltimore.—Palmore & Homand, 420-22 E. Lexington St., will erect Guilford Theater, Greenmount Ave. and 33d St.; seating capacity 2000; \$250,000; Oliver B. Wight, Archt., 1101-2 Munsey Bldg. (Lately noted.)

N. C., Asheville.—S. A. Lynch Enterprises will erect \$150,000 motion-picture theater on Church St.; seating capacity 2100; arcade entrance 25x150 ft., theater proper extending 150 ft.

Warehouses.

Ala., Anniston.—Chamber of Commerce is promoting organization of \$10,000 corporation to erect potato warehouse and drying-house; 15,000-bu. capacity.

Fla., Jacksonville.—Good Hope Water Co., 14th and Pearl Sts., will erect office building and distributing depot.

Ky., Louisville.—National Biscuit Co. will erect 1-story warehouse and office, 21st and Howard Sts.; brick and frame; 100x65 ft.; \$35,000; Nevlin & Wischmeyer, Archts., Starks Bldg.

La., Lake Charles.—De Latte & La Grange will erect warehouse at Ryan and Clarence Sts.; 100x125 ft.; brick; fireproof roof; concrete floors; Phillips & McCook, Archts.

La., New Orleans.—G. B. Matthews & Son, 412 S. Front St., will erect warehouse and factory, Cortez and Scott Sts.; \$250,000; M. H. Goldstein, Archt., 305 Baronne St. (Lately noted.)

La., Pioneer.—Standard Oil Co. of Louisiana

will erect storage station in Johnson addition.

Miss., Hattiesburg.—Barron Motor Co. will erect warehouse; 100x100 ft.; 1 story; cement floors; also erect 2-story brick building for salesrooms and offices; 82x140 ft.

Okla., Picher.—Lead & Zinc Co., J. McNichols, Mgr., plans to erect reinforced concrete

warehouse; reinforced concrete floors; \$100,000.

Tex., Dallas.—Apex Co. plans to erect warehouse on K St.

Tex., Houston.—Brooks Petroleum Co., W. B. Brooks, Prest., is considering locations on Houston Ship Channel for erection of warehouses; also plans to construct 2 tanks on Galveston waterfront; total cost, \$200,000.

BUILDING CONTRACTS AWARDED

Apartment-Houses.

Fla., Tampa.—T. H. Abbey, A. H. Smith and Hewitt Walker will erect \$75,000 apartment-house as lately noted; 2 stories; 70x131 ft.; reinforced concrete; built-up roof; pine and concrete floors; plaster board; ornamental terra-cotta; interior tile; wire-glass; ventilators; individual gas heaters; city lights; G. U. Moyer, Archt.; S. U. Moyer, Contr. (See Machinery Wanted—Plumbing; Furniture, etc.; Millwork.)

Bank and Office.

Okla., Tulsa.—Dan Hunt will erect 10-story office and theater building, Main St. between 5th and 6th Sts.; 50x140 ft.; structural steel, hollow fireproof tile, brick and terra-cotta; gravel roof; tile and concrete floors; metal ceilings; wire glass; ventilators; steel sash and trim; 2 passenger elevators; \$450,000; W. D. Vansiclen, Archt., 319 S. Detroit St.; A. F. Wasielewski Co., Contr., 1319 S. Cheyenne St. (Lately noted.)

Tex., Dallas.—Magnolia Petroleum Co., Great Southern Life Bldg., will erect \$3,000,000 office building; 24 stories; 100x138 ft.; steel and reinforced concrete; tile roof; concrete and tile floors; vacuum system, high-pressure boiler heating plant, \$200,000; Otis elevators, \$150,000; Alfred C. Bosson, Archt., 680 Fifth Ave., New York; Lang & Wittich, Associate Archts., Dallas; C. T. Wills, Inc., Contr., 286 Fifth Ave., New York; Brinkley Brick & Tile Co., Coleman, Tex., material. (Lately noted.)

Tenn., Bristol.—Union Trust Bank will remodel building and install fixtures; \$45,000; vaults; vault lights; C. B. Kearfott, Archt.; Martin & Sons, Contrs. (Lately noted.)

Churches.

Ala., Tuscaloosa.—First Presbyterian Church will erect building; R. H. Hunt, Archt., Chattanooga, Tenn.; J. A. Taylor, Northport, Contr. for concrete Sunday-school basement. (Lately noted.)

Md., Baltimore.—Sharp Street Memorial M. E. Church will erect \$75,000 community building, 1206-10 Etting St.; 5 stories; brick; 43x78 ft.; Calvin Barnes Co., Contrs., 113 E. Franklin St. (Previously noted.)

Miss., McComb.—Presbyterian Church will erect \$60,000 building, Delaware Ave. and 3d St.; Kramer Co., Archt. and Contr.

Okla., Chelsea.—Methodist Church will erect \$25,000 building; 2 stories and basement; 46x80 ft.; F. W. Hunt, Archt.; V. O. McCormick, Contr., both Miami, Okla.

Okla., Tulsa.—First Methodist Church, Rev. J. W. Abel, Pastor, will erect \$350,000 building, 11th St. and Boulder Ave.; 2 stories; brick, reinforced concrete and steel; concrete floors and foundation; French Gothic style; Wight & Wight, Archts., First Natl. Bank Bldg., Long Construction Co., Contr., for basement, both Kansas City, Mo. (Previously noted.)

City and County.

Ga., Atlanta.—Library.—City will erect \$50,000 Carnegie Library for negroes, Auburn

Ave. and Hilliard St.; red brick and limestone; colonial design; Hentz, Reid & Adler, Archts.; Caldwell & Zin, Contrs. (Previously noted.)

Okla., Tulsa.—Farm Building.—County Commissioners, Lewis Cline, County Clk., Court-house, will erect 1-story stone building and install plumbing and steam heat, county poor farm, nr. Tulsa; \$63,000; L. J. Buck, Contr. (Lately noted.)

Tex., El Paso.—Fire Station.—City, Percy McGhee, Jr., Bldg. Inspector, will erect brick fire station, Richmond and Piedras Sts.; J. W. Chamness, Contr. at \$12,065. (Lately noted.)

Va., Portsmouth.—Fire Station.—City, J. P. Jervy, City Mgr., will erect brick fire station, Lincoln and Virginia Aves.; Magann & Baker, Contrs. at \$10,475. (Lately noted.)

Courthouses.

Tex., Angleton.—Braxoria County, C. L. Cochran, Auditor, will erect 2-story addition to courthouse; 6 rooms; John McLelland, Archt., 1310 Walker Ave., Houston; Jim Booth, Supvr. of construction, Angleton. (Lately noted.)

Dwellings.

Fla., Daytona.—H. A. Thrift, 1602 17th St., Washington, D. C., temporary address Ivy Lane Hotel, Daytona, purchased site at Fairview and Ridgewood Aves. and will erect bungalow; contracts let.

Fla., Moore Haven.—South Florida Farms Co. will erect number of residences; contracts let.

La., Shreveport.—D. N. Hursey will erect \$6500 dwelling, Jackson St.; Jim Herndon, Contr.

Md., Baltimore.—Edw. B. Thompson, 4902 Park Heights Ave., will erect \$7000 residence, 3709 Chatham Rd.; 2½ stories; frame; 29x32 ft.; Walter S. Flower, Archt.; Robert W. Flower, Contr., 1209 E. North Ave.

Mo., St. Louis.—Chas. Solomon, 7601 S. Broadway, will erect \$15,000 residence and store; 2 stories; 21x51 ft.; Ed. Lantz, Archt., 600 Post-Dispatch Bldg.; August Stohlman, Contr., 3918 Pennsylvania Ave.

S. C., Laurens.—Laurens Cotton Mills will erect 140 cottages; Bryson & Webber, Contrs., Spartanburg.

S. C., Spartanburg.—Spartan Mills will erect 70 cottages, Wofford St.; 35 to 40 now under construction; Bryson & Webber, Contrs.

Tex., El Paso.—Jay F. Knox, 301 Caples Bldg., will erect 10 bungalows; \$25,000; 23x26 ft.; brick; asphalt roofs; pine floors; J. E. Bischoff, Contr. (Lately noted.)

Va., Richmond.—I. C. Edmonds will erect \$13,000 frame and stucco residence, Hawthorne Ave.; O. S. Peers, Contr.

Government and State.

Fla., West Palm Beach.—Laboratory.—State Board of Health, Dr. Ralph N. Greene, State Health Officer, Jacksonville, will erect laboratory, 4th Ave.; \$34,500; 37.2x45.4 ft.; 2 stories; fireproof; stone, brick and concrete; iron stairway with marble treads; tile floors; red tile

roof; 4 colonial columns of Bedford limestone; interlocking tile; Walter D. Willis, Archt., 617 Blount Bldg., Pensacola; E. H. Barton, Contr., West Palm Beach. (Lately noted.)

Tex., Corsicana.—Home.—State Orphans' Home will erect additional story to hospital; \$20,000; H. O. Blanding, Corsicana, and Page Bros., Austin, Archts.; G. W. Brillhart, Contr., Corsicana. (Lately noted.)

Hospitals, Sanitariums, Etc.

Ga., Atlanta.—Davis Fischer Sanitarium will erect \$200,000 building; 7 stories; 50x147 ft.; concrete and brick; asphalt roof; tile, concrete and hardwood floors; steam heat, \$10,000; electric elevators, \$5000; hollow fireproof tile; interior tile; rolling partitions; wire glass; steel sash and trim; E. C. Wachen-dorff, Archt.; F. P. Helfner, Contr., 606 Peters Bldg. (Previously noted.)

Tenn., Knoxville.—Eastern Hospital for Insane, Dr. Smith, Supt., Lewis S. Pope, Gen. Mgr. of State board of administration, Nashville, will erect frame tuberculosis sanitarium; 75 patients; W. P. Lawson, Contr., Knoxville. (Lately noted.)

Hotels.

N. C., Sanford.—D. C. Lawrence will erect 50 to 60-room hotel; J. W. Stout & Co., Contrs. (See Machinery Wanted—Heating Plant; Bathroom Fixtures; Roofing.)

Miscellaneous.

Fla., Tampa.—Fair.—South Florida Fair Assn., Henry E. Snow, Director, will erect poultry building, 70x100 ft.; remodel and enlarge negro building; repair and erect addition to swine section; rebuild bleachers, remodel grandstand, etc.; Loan Bros., Contrs. (Lately noted.)

Okla., Oklahoma City.—Coliseum.—Oklahoma Coliseum Corp., M. D. Scott, Prest., will erect \$250,000 building; main structure 170x203 ft.; annex 200x300 ft.; steel, concrete, brick and hollow fireproof tile; galvanized steel roof; concrete floors; wire-glass; ventilators; steam heat; Hawk & Parr, Archts., Magnolia Bldg.; C. E. Huffman, Contr. (Lately noted.)

S. C., Laurens.—Clubhouse.—Bois-Terre Club, Geo. M. Wright, Prest., will erect clubhouse; J. E. Sirrine, Archt., Greenville; Brownlee & Creamer, Contrs., Laurens.

Tex., San Angelo.—Clubhouse.—San Angelo Country Club, W. C. Blanks, Prest., will erect clubhouse; Spanish architecture; 48x96 ft.; first story, native rock; second, frame; 12-ft. gallery extending around 3 sides; \$20,000, exclusive of plumbing, heating, electric wiring; P. A. Williams, Contr. (Previously noted.)

Schools.

Ala., Flat Rock.—Flat Rock High School, L. G. Alverson, Principal, contemplates erecting boys' dormitory to replace burned structure lately noted; 70x100 ft.; stone; asphalt or rubber roof; rift pine floors; \$20,000; steam heat, \$3000; Delco or similar lighting, \$2000. Address H. H. Black, Archt. and Contr. (Lately noted.)

D. C., Washington.—Board of District Commissioners, 500 District Bldg., will erect Wood-ridge-Langdon School, Monroe and Newton Sts.; 1 story; 200x130 ft.; fireproof; brick; slate roof; wood floors; indirect system of lighting; \$165,111. Snowden Ashford, Archt., District Bldg.; W. E. Mooney, Contr., Evans Bldg. (Previously noted.)

Mo., St. Joseph.—Board of Education, H. C. Weston, Ch. Engr., will replace roof of school lately noted burned; concrete slab, tar and gravel roof; Lawhon Constr. Co., Contr. (Lately noted.)

Okla., Dustin.—Board of Education, L. A.

Riddle, Clk., will erect \$40,000 school; 1 story and basement; 100x80 ft.; brick; stone trim; Monnot & Reid, Archts., Oklahoma City; W. L. Scott, Contr., Sulphur, Okla. (Lately noted.)

Okla., Wellston.—Board of Education, Consolidated Dist. No. 1, C. T. Bates, Clk.; erect \$75,000 school; 2 stories and basement; 53x150 ft.; C. P. Neider, Archt., Empress Theater Bldg.; Kreipke-Schafer Construction Co., Contr., Herskowitz Bldg., both Oklahoma City.

Stores.

D. C., Washington.—Allan E. Walker Co., 813 15th St. N. W., will erect 5-story business building, 17th and L Sts. N. W.; 104x135 ft.; \$300,000; also erect 3-story and basement building, Connecticut Ave., near L St. N. W.; \$200,000; E. H. Mosher, Contr., 539 Munsey Bldg.

Ky., Louisville.—S. S. Kresge Co., Ray Cummings, Supt. of Constr., Kresge Bldg., Detroit, will remodel store; D. X. Murphy & Bro., Archts., Louisville Trust Bldg.; Platoff

& Buck, Contrs., both Louisville. (Previously noted.)

La., New Orleans.—Bowie Lumber Co. will erect building, Carondelet and Poydras Sts.; \$75,000; Sam Stone, Jr., Archt.; O. M. Gwinn Construction Co., Contr.

Md., Baltimore.—Feldman & Weinman, 2 and 4 N. Frederick St., will remodel store front, 500 E. Baltimore St.; Lytle, Campbell & Co., Contrs. (Lately noted.)

Theaters.

La., New Orleans.—Saenger Amusement Co. will expend \$5000 to repair picture theater, Canal and Iberville Sts.; Underwood Contracting Corp., Contr.

Mo., Nevada.—McAfee & Sanberg, Parsons, Kans., will erect \$30,000 moving-picture theater; 1 story and basement; 25x150 ft.; H. R. Primmer, Archts.; Lents & Carlton, Contrs., both Nevada.

Okla., Oklahoma City.—Capitol Theater Co. will rebuild Dreamland Theater, 308-10 W.

Main St.; extend main auditorium 30 ft.; seating capacity 1100; remodel interior of building; construct balcony, widen lobby, etc.; \$75,000; Campbell & Price, Contrs.

Va., Norfolk.—Virginia-Carolina Amusement Co. will erect moving-picture theater on Granby St., between Freemason and Washington Sts.; 70-ft. frontage; seating capacity, 1700; \$150,000; Johnson Construction Co., Contr.

Warehouses.

Md., Baltimore.—Wm. F. Zeller Co., 1119-33 Denver St., will erect \$12,000 storage building; hollow tile; slag roof; concrete floors; General Contracting Co., Contr., Calvert Bldg.

Mo., St. Louis.—United States Register Co., J. R. Payne, Mgr., 510 W. 5th St., will erect warehouse; 3 stories and basement; 40x105 ft.; brick; 4-ply slag roof; wood floors; \$45,000; R. H. Sanneman, Archt., Reserve Bank Bldg.; Edelman-Fleming Construction Co., Contr., Broadway Bank Bldg. (Lately noted.)

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Apple-butter-making Machinery.—James E. Feese, Mgr. Blue Mountain Food Products Co., Smithburg, Md.—Prices on apple-butter-making mch.

Bank Fixtures.—L. E. Martin, Cashr. Caroline County Bank, Bowling Green, Va.—Names and addresses dealers in banking fixtures.

Barge.—Gulf Machinery & Investment Co., New Orleans, La.—Knocked-down barge for mounting mch.

Bathroom Fixtures.—D. C. Lawrence, Sanford, N. C.—Prices on bathroom fixtures for 50 to 60-room hotel.

Boiler.—See Electrical Equipment.

Boiler.—Walter E. Mills, 1222 Volunteer Bldg., Chattanooga, Tenn.—Prices on second-hand 125 or 150 H. P. Scotch marine or locomotive type boiler, complete with fittings, stack, etc.; 125 lbs. pressure; state location and condition.

Boiler.—Atlantic Engineering Co., 20 Commercial Bank Bldg., Savannah, Ga.—100 to 150 H. P. H. R. T. boiler, good for 125 to 150-lb. steam pressure, with steel casings and half front preferred; state description, information and best dealers' resale price f. o. b. cars shipping point, naming same both with and without stack if stack is available.

Brass Tubing, etc.—Panama Canal, A. L. Flint, General Purchasing Officer, Washington, D. C.—Bids until Dec. 21 to furnish: Brass, copper and steel tubing; cocks; valves; ship augers; carpenters' clamps; breast drills; drills and countersinks; sledge hammers; saws; wrenches; eye and ring bolts; steel cotter; gate hooks; awning pulleys; conduits; battery coppers; running light indicators; watt-hour meters; lamp sockets; push carts; lamp cord; brushes, sandpaper, etc. Blank forms and information (Circular 1426) on application to offices of: Panama Canal; Asst. Purchasing Agents at New York, New Orleans, San Francisco; U. S. Engr. offices throughout the country.

Brick and Tile Machinery.—Chamber of Commerce, Jed Morrow, Carnegie Bldg., Vernon, Tex.—Prices on brick and tile mch.

Bridge Construction.—Bolivar County Supervisors, Cleveland, Miss.—Bids until Dec. 28; to build 2 reinforced concrete bridges; 13,100 lbs. reinforcing steel; plans, etc., with Chancery Clk., Cleveland and H. C. Dietzer, State Highway Engr., Jackson, Miss.

Bridge Construction.—Tarrant County Comms., W. E. Yancy, County Auditor, Fort

Worth, Tex.—Bids until Dec. 13 to build 3 highway bridges; 60-ft. reinforced concrete bridge, consisting of three spans over Walker's Lake; one 30-ft. reinforced concrete bridge, consisting of span over King's branch, and 30-ft. reinforced concrete bridge, consisting of one span over Live Oak Creek; all on White Settlement road, consisting of reinforced concrete slabs, abutments, wing walls, etc.; plans, etc., with R. V. Glenn, Const. Engr.

Bridge Construction.—Duval County Commissioners, Frank Brown, Clerk, Jacksonville, Fla.—Bids until Dec. 21; to extend Yellow Water Creek bridge 60 ft.

Bucket.—Atlantic Engineering Co., Suite 20 Commercial Bank Bldg., Savannah, Ga.—Dealers' prices on single-line clamshell bucket, $\frac{3}{4}$ -yd. Williams preferred; state condition and f. o. b. cars shipping point.

Bridge Construction.—York County Commissioners, York, S. C.—Bids until Dec. 15 at office W. M. Miller, County Engr., Rock Hill, S. C., to construct reinforced concrete bridge of three 25-ft. clear spans across Stoney Fork Creek on Saluda-Chester road; Federal-aid Project No. 103; requires 26,660 lbs. reinforcing steel; plans, etc., with County Engr. at Rock Hill; J. D. Gregory, Div. Engr., Columbia, S. C., and State Highway Engr., Columbia.

Bridge Construction.—Miller County Commissioners Roads and Revenues, W. C. Dancer, Chrmn., Colquitt, Ga.—Bids until Dec. 22; to build reinforced concrete deck-girder bridge over Spring Creek on Colquitt-Blakeley road; 137,837.7 lbs. reinforcing steel; 1088 sq. yds. Kentucky rock asphalt paving; plans, etc., on file at Colquitt with State Highway Dept., Thomasville, Ga., and State Highway Engr., Walton Bldg., Atlanta, Ga.

Building Material.—A. D. Reynolds, 37 Fourth St., Bristol, Tenn.—White or light marble or stone cast trim suitable for dark sand stone church building.

Building Material.—Jas. E. Cooper, Commercial Bank Bldg., Washington, D. C.—Catalogs and information on terra-cotta, tile, Harvard brick and stucco finishes for \$100,000 country residence.

Canning Equipment.—H. H. Hall, Mgr., Dothan, Ala.—Names and addresses mfrs. of fruit and vegetable canning equipment.

Cars.—L. F. Hobbs, P. O. Box 483, Norfolk, Va.—Twelve 2-yard or 2½-yard steel rocker dump cars, 36-in. gauge.

Cars.—Pennsylvania Equipment Co., 1420

Chestnut St., Philadelphia, Pa.—4 all-steel 40-ton capacity flat bottom or V-shaped cars, to discharge load on both sides; 4-wheel caboose car; steel underframe 50-ton capacity flat car, 36 to 40 ft. long; all second-hand.

Cars.—Producers Sand & Gravel Co., 408 Union National Bank Bldg., Houston, Tex.—Bids on 10 side dump gravel cars, all metal truck with wood superstructure, 5x9 sills with 24-in. sides.

Catalogs (Road Construction and Sewerage).—James E. Cooper, Archt., Commercial Bank Bldg., Washington, D. C.—Catalogs and information on road building and sewerage.

Chucks.—John G. Duncan Co., 101 E. Jackson St., Knoxville, Tenn.—Prices on chucks for turning 1½-in. broom handles.

Confectioners' Supplies.—C. L. Wiseman, Keyser, W. Va.—Data and prices on supplies for candy manufacture.

Containers.—James E. Feese, Mgr. Blue Mountain Food Products Co., Smithburg, Md.—Prices on quart containers for apple butter; jelly glasses; shipping containers to hold twelve 1-qt. jars.

Construction Engineer.—Hancock Steel Co., Martinsburg, W. Va.—Desires services of engineer to plan and equip foundry and machine department complete.

Crane.—H. W. Dexter, East 16th St., Jacksonville, Fla.—Second-hand 15-ton 8-wheel M. C. B. equipped locomotive crane with 40-ft. boom and bucket drum.

Decorations.—Jas. E. Cooper, Commercial Bank Bldg., Washington, D. C.—Catalogs and information on interior decorations for \$100,000 country residence.

Drainage System.—Gray's Creek Drainage Dist., Fayette and Shelby County Comms., Somerville Tenn.—Bids until Dec. 29 to construct main canal and laterals, total excavation 272,300 cu. yds.

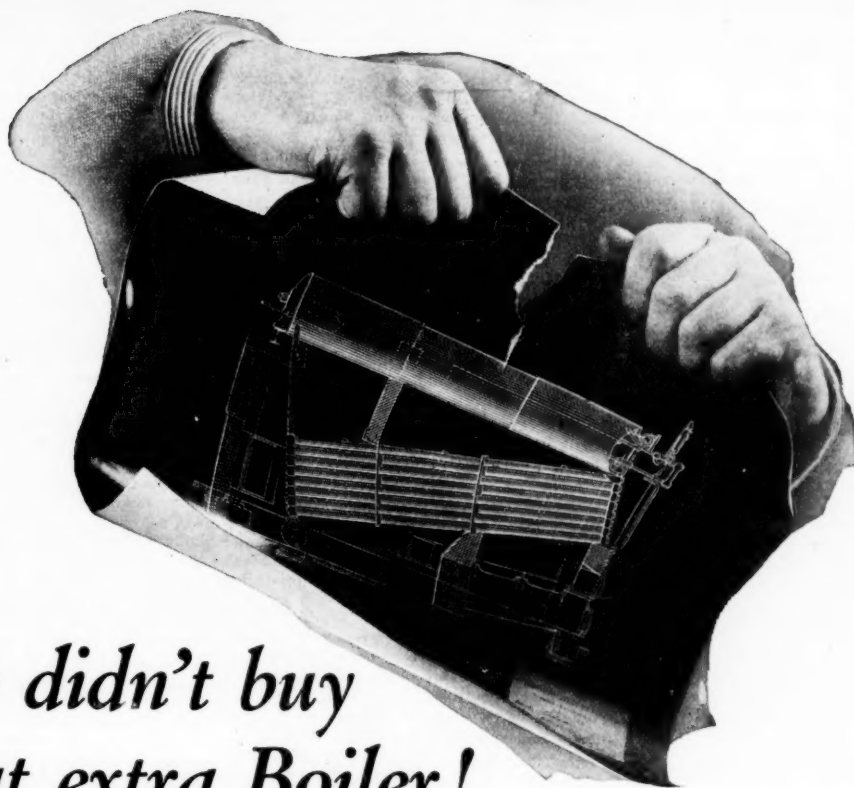
Drainage System.—Harris County Dist. No. 8, Chester H. Bryan, Judge, Houston, Tex.—Bids until Jan. 3 to construct drainage improvements; 700,000 cu. yds. excavation.

Dredging, etc.—U. S. Engr. Office, Norfolk, Va.—Bids until Jan. 7 for dredging and wharf construction; information on application.

Dredging.—U. S. Engr. Office, 329 Custom House, New Orleans, La.—Bids until Jan. 10 to dredge Intercoastal Waterway between Mermentau and Calcasieu Rivers.

Dredging, etc.—War Dept., U. S. Engr., Washington, D. C.—Bids until Jan. 7 for

(Continued on Page 142.)



He didn't buy that extra Boiler!

A BIG, middle western manufacturer was in trouble. He wanted more steam. He had about decided to order another boiler, when the "85% Magnesia" man came along.

He was so full of his troubles that he spilled them all over that Magnesia salesman.

The salesman had a hunch: It was several years since the pipes and boilers in this plant had been covered. Meanwhile every boiler had gradually been forced until it was giving nearly three times its rated capacity.

He tested one steam line and did some quick figuring. That plant was wasting enough steam by condensation to run another boiler. He showed by the Magnesia Association Specification the correct thickness of covering that was

needed and the pipes were covered with the required extra thickness of "85% Magnesia". *The extra boiler was never ordered.*

Mr. Steam user, have you overhauled your plant lately? Isn't it more than possible you are wasting tons of coal every day by insufficient covering? "85% Magnesia" is the best possible coal saver, but you need enough of it to get the maximum of coal saving at the higher pressures you are using today.

Look at your steam traps. Heavy condensation means insufficient covering.

Don't buy an extra boiler before you write us, and be sure to read "Defend Your Steam," the new treatise on coal saving, full of valuable information, tables and data. It is sent free to plant executives on request.

MAGNESIA ASSOCIATION of AMERICA

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Philadelphia, Penna.

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J. R. Swift, The Franklin Mfg. Co., Franklin, Penna.

Alvin M. Ehret, Ehret Magnesia Mfg. Co., Valley Forge, Penna.

R. V. Mattison, Jr., Keasbey & Mattison Co., Ambler, Pa.

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dredging Elizabeth River and construct timber wharf.

Draperies.—Jas. E. Cooper, Commercial Bank Bldg., Washington, D. C.—Catalogs and information on hangings for \$100,000 country residence.

Drivers (Corrugated Fastener).—See Wood-working Machinery.

Drills (Bench), etc.—Panama Canal, A. L. Flint, General Purchasing Officer, Washington, D. C.—Bids until Dec. 30 to furnish bench drills; power hacksaw; lathe; planer and joiner; arbor press; band saws; brass; bronze; copper; lead; bearing metal; iron or steel ridge roll; solder; tin; iron or steel pipe; track bolts; nails; locknuts; chain shackles; arc controls; copper cable; copper and bronze wire; steel conduits; fuses; shade holders; porcelain knobs; mica; attachment plugs; receptacles; reflectors; battery renews; manila rope; twine; lumber; mill-work, etc. Blank forms and information (Circular 1427) on application to offices of Panama Canal Asst. Purchasing Agts. at New York, New Orleans, San Francisco; U. S. Engr. offices throughout country.

Mechanical Equipment.—School Comms., John H. Roche, Secy., Madison and Lafayette Aves., Baltimore, Md.—Bids until Dec. 22 to furnish and install mech. and other equipment for Baltimore Polytechnic Institute.

Electrical Equipment.—Samuel T. Williams, Contr. Engr., 223 N. Calvert St., Baltimore, Md.—350 to 400 K. W. generating unit, direct connected to engine; prefer turbine set complete with condenser; also 2 boilers suitable for this unit; boilers to be for 150 lbs. pressure.

Electric Fixtures.—C. R. Baum, 1022 Wyandotte St., Kansas City, Mo.—Electric-lighting fixtures for 3-story apartment.

Ferrotypes.—Frank Kummeth, Heron Lake, Minn.—Names and addresses mfrs. of ferrotype in sheets of 2 or 3 ft. wide and 6 to 8 ft. long.

Elevator.—Samuel T. Williams, Contr. Engr., 223 N. Calvert St., Baltimore, Md.—Freight elevator suitable for use in guano factory; about 4000 lbs. capacity to lift 30 ft.; platform 6x8 ft. to 8x8 ft.; operate by electricity or belt power; also small electric passenger elevator suitable for 4-story hotel.

Engine.—Gulf Machinery & Investment Co., New Orleans, La.—New or second-hand 100 to 125 H. P. Diesel or semi-Diesel engine.

Engine.—Ira O. Hall, care Foos Gas Engine Co., Springfield, O.—Prices on 200 to 250 H. P. multi-cylinder vertical natural-gas engine to operate four mills; second-hand.

Engine.—Central Kentucky Block Coal & Mineral Co., L. G. Powers, Gen. Mgr., Hawesville, Ky.—Baldwin or Rogers standard-gauge switch engine to handle 25 cars.

Engine.—Dixie Brick & Tile Co., J. E. Minter, Gen. Mgr., Columbus, Ga.—60 H. P. stationary gasoline engine to operate 24 hours per day; would correspond with manufacturers.

Furniture, etc.—T. H. Abbey, P. O. Box 333, Tampa, Fla.—Prices on furniture and furnishings for \$75,000 apartment-house.

Furniture.—Jas. E. Cooper, Commercial Bank Bldg., Washington, D. C.—Catalogs and information on garden furniture for use in connection with \$100,000 country residence.

Gang (Wick Sash).—H. L. Lawton, Lena, S. C.—Small second-hand belt-driven wick sash gang.

Generators.—Ira O. Hall, care Foos Gas Engine Co., Springfield, O.—Lowest prices on second-hand 15 to 30 K. V. A. and 125 to 150 K. V. A. 2300-volt 60-cycle generators; state manufacturer's type, location, years of service; immediate delivery.

Heating Plant.—D. C. Lawrence, Sanford, N. C.—Prices on heating plant for 50 to 60-room hotel; American Radiator low-pressure system preferred.

Heating Plant.—Jas. E. Cooper, Commercial Bank Bldg., Washington, D. C.—Catalogs and information on heating plant for \$100,000 country residence.

Horseshoes, etc.—N. Velasco, Valladolid, Spain.—Data on mfrs. horseshoes and nails; view to representation.

Ingots.—Wheeling Art Metal Mfg. Co., 16 19th St., Wheeling, W. Va.—Data and prices on brass and white metal ingots.

Kitchen Cabinets.—C. R. Baum, 1022 Wyandotte St., Kansas City, Mo.—Kitchen cabinets.

Lathe.—John G. Duncan Co., 101 E. Jackson St., Knoxville, Tenn.—Dealers' prices on second-hand broom-handle lathe for turning a taper handle 1½-in. diam. at large end.

Light Plant.—Jas. E. Cooper, Commercial Bank Bldg., Washington, D. C.—Catalogs information on lighting systems for \$100,000 country residence.

Machine Shop Equipment, etc.—S. F. Skoblin, 12 Ronala St., Harbin, China.—To represent mfrs. of: Machine shop equipment and supplies; engines; boilers; electric and gas machines; wire nails and wire products; manila rope; automobiles; engineers' supplies and tools; axes; hatchets; braces; rules; measuring tapes; files; wrenches; screws; nuts; chairs; shovels; saws; blacksmith tools; enamelware; refrigerators; cutlery; linoleum; oilcloth, etc.

Mains (Fire Service).—Treasury Department, Supervising Archt.'s Office Washington, D. C.—Bids until Jan. 7 to install fire service mains, etc., at U. S. Marine Hospital, New Orleans, La.; plans on file or with Custodian at hospital.

Millwork.—T. H. Abbey, P. O. Box 333, Tampa, Fla.—Prices on doors and sash for \$75,000 apartment-house.

Mining Equipment.—Central Kentucky Block Coal & Mineral Co., L. G. Powers, Gen. Mgr., Hawesville, Ky.—Prices on new or second-hand equipment for 900-ton daily capacity electrically-equipped mine.

Mining Machinery.—W. A. Ellison, Mgr. Mahan-Ellison Coal Corp., Kitts, Ky.—Mining machinery.

Motors.—Thos. O. Berry, Secy. Enterprise Lumber Co., Mt. Olive, N. C.—Motors.

Motor Generator Set.—Consolidated Products Co., 38 Park Row, New York.—325 to 425 K. W. D. C. generator, 200 to 300 volts, direct connected to A. C. motor, 3-phase, 60-cycle, 2200 volts.

Motor.—Samuel T. Williams, Contr. Engr., 223 N. Calvert St., Baltimore, Md.—400 H. P. electric motor; 2200 volts, 3-phase, 60-cycle, about 600 R. P. M. and reversible.

Motors, etc.—Navy Dept., Bureau of Supplies and accounts, Washington, D. C.—Bids until Dec. 1 to furnish induction motors, fire hose, cutting oil, etc., to Navy-yard, Washington.

Oil.—Duval County Comms., Frank Brown, Clerk, Jacksonville, Fla.—Bids until Dec. 10 to furnish 16,000 gals. road oil, delivered f. o. b. South Jacksonville.

Paving.—City, T. E. Batson, Mayor, Hattiesburg, Miss.—Bids until Dec. 16; to pave Newman St.; vitrified brick; 6644 sq. yds. paving; 5555 lin. ft. curbing; plans, etc., with City Clk.

Paving.—John Tarleton Agricultural College, J. Thomas Davis, Dean, Stephenville, Tex.—Bids about Jan. 1 to construct concrete curbing and sidewalks; \$5000.

Paving.—City, Eugene Forbes, Mayor,

Weatherford, Okla.—Bids opened in spring for paving 13 blocks street; \$181,000 available; V. V. Long & Co., Engrs., Oklahoma City.

Paving.—City, Joe Merrill, City Clerk, Hartshorne, Okla.—Bids opened in spring; to pave 8½ blocks street; concrete; \$72,000 available; V. V. Long & Co., Engrs., Oklahoma City.

Paving.—City Comsn., W. P. Hunter, City Mgr., Roanoke, Va.—Bids about March 1; to pave streets; issued \$400,000 bonds.

Planers.—Thos. O. Berry, Secy. Enterprise Lumber Co., Mt. Olive, N. C.—Planers.

Plumbing.—C. R. Baum, 1022 Wyandotte St., Kansas City, Mo.—Bathroom and toilet equipment, kitchen sinks, etc., for 3-suite apartment.

Plumbing.—T. H. Abbey, P. O. Box 333, Tampa, Fla.—Prices on plumbing fixtures for \$75,000 apartment-house.

Plumbing.—Jas. E. Cooper, Commercial Bank Bldg., Washington, D. C.—Catalogs and information on plumbing for \$100,000 country residence.

Posts (Iron Lamp).—Board of Awards, care City Register, Baltimore, Md.—Bids until Jan. 5 to furnish: Plain and ornamental-iron lamp posts; specifications with John J. Hanson, Supt. of Lamps and Lighting.

Pump.—Gulf Machinery & Investment Co., New Orleans, La.—New or second-hand 8-n. manganese-steel centrifugal gravel pump; belt driven preferred.

Pump.—Joseph N. Parker, Engr., care Parker Motor Plow Co., Richmond, Va.—Information on variable stroke hydraulic pressure pump, to vary from full stroke to no stroke without stopping crank movement.

Pumps.—Samuel T. Williams, Contr. Engr., 223 N. Calvert St., Baltimore, Md.—Feed-water heater.

Pumps.—City of Enid, Okla., R. T. Williams, Clk.—Bids until Dec. 15; 6 motor-driven deep-well pumps.

Radiator Valves.—C. R. Baum, 1022 Wyandotte St., Kansas City, Mo.—Radiator hot-water valves for 3-story apartment.

Ranges.—C. R. Baum, 1022 Wyandotte St., Kansas City, Mo.—Three gas ranges with oven for apartment-house.

Road Construction.—Wilcox County Commissioners Roads and Revenues, Pat M. Dannelly, County Judge, Camden, Ala.—Bids until Jan. 3; to construct hard-surfaced road from Four-Mile Hill to Boykin Bridge.

Road Construction.—Mercer County Commissioners, L. G. Bowling, Clk., Princeton, W. Va.—Bids until Dec. 15 to grade 5 mi. road from Bluestone River, nr. Kegley, to Spanishburg; 26 ft. wide; Federal-aid Project 44; E. C. Barton, Engr.

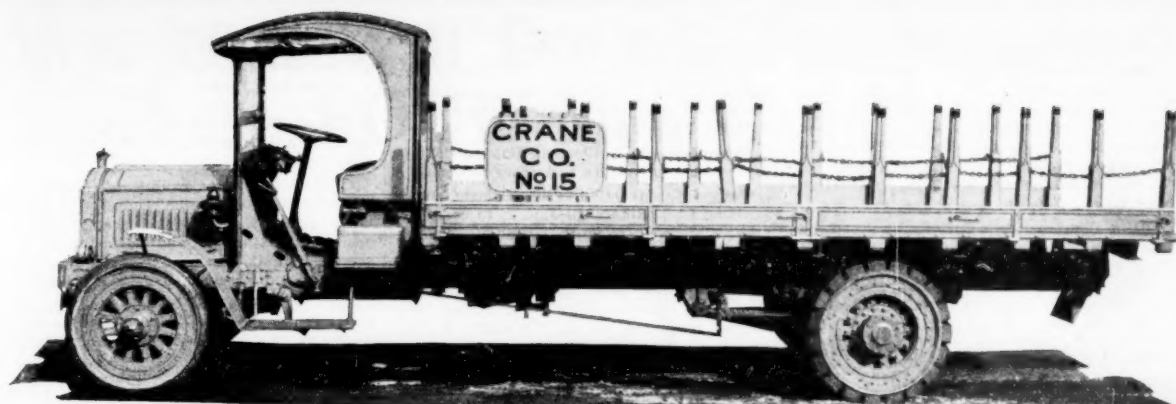
Road Construction.—State Highway Dept., Henry Wood, Commr., Oklahoma City, Okla. Bids until Dec. 21; to construct 15.98 mi. road in Carter County; gravel, rock asphalt, cement concrete, asphaltic concrete surfacing on concrete base.

Road Construction.—State Highway Dept., Henry Wood, Commr., Oklahoma City, Okla. Bids until Dec. 21; to construct 13 mi. road in Oklahoma County; cement concrete, sheet asphalt, asphaltic concrete, brick surfacing on concrete base.

Road Construction.—McLennan County Comms., J. P. Alexander, County Judge, Waco, Tex.—Bids until Dec. 18 to construct 5.16 mi. bituminous macadam road on Highway No. 7 from Waco to Tehuacana Creek; Mantan Hannah, County Engr.

Road Construction.—State Highway Dept., Henry Wood, Commr., Oklahoma City, Okla.

(Continued on Page 144.)



Kelly Caterpillars work *with the engine*

The most powerful truck in the world can't pull its rated load unless the tires can get traction.

In heavy mud, in snow, on "slick," greasy roads, the truck shod with ordinary smooth solids is at a hopeless disadvantage. Even chains don't help much under some conditions.

But the truck that rolls on Kelly Caterpillars rolls whenever the driver wants it to, because Caterpillars don't slip.

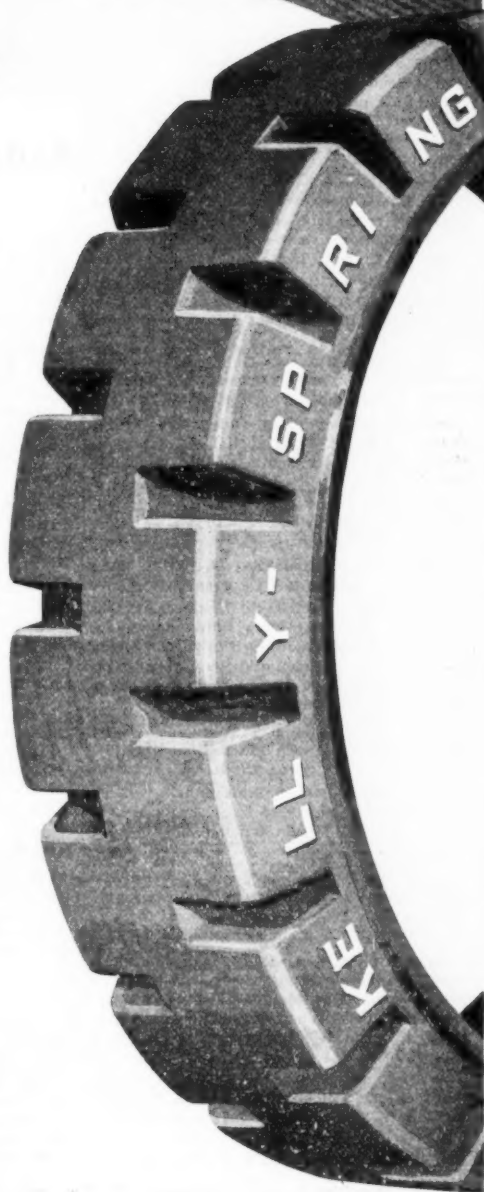
Their economy features are important—their ability to deliver great mileage and to save gasoline, oil and truck depreciation—but the quality that has put Kelly Caterpillars on the fleets of the biggest operators in America is their ability to take the truck wherever it wants to go, whenever it wants to go there.

Kelly-Springfield Tire Company

GENERAL SALES DEPARTMENT

1710 Broadway

New York



Bids until Dec. 21; to construct 21.79 ml. gravel road in McIntosh County.

Road Construction.—State Highway Dept., Div. Office, Greensboro, N. C.—Bids until Dec. 17; to construct 2.28 ml. road in Union County; Project No. 39; 17,720 sq. yds. concrete base and header course; 18,735 sq. yds. Topeka surfacing, 2 in.; specifications, etc., on file at Raleigh, W. S. Falls, State Highway Engr., Raleigh.

Road Construction.—Fort Smith Road Improvement Dist. Commrs., Kennedy Bldg., Fort Smith, Ark.—Bids until Dec. 15 to construct 41 ml. asphalt macadam penetration method road, including grading, draining and stone base; plans, etc., on file at Fort Smith, Ark.; with State Highway Dept. and Hugh R. Carter; both Little Rock.

Road Construction.—Bureau Yards and Docks, Navy Dept., Washington, D. C.—Bids until Dec. 29 to construct 5575 sq. yds. one-course plain concrete roads, complete drainage system in connection therewith; reinforced concrete retaining wall and electric duct system; all at navy-yard; drawings and specifications No. 4238 obtained on application to the Bureau or to Commandant, Navy-yard; C. W. Parks, Chief of Bureau.

Road Construction.—Lafayette County, Beat 3 Road Dist., N. Price, Chrmn., Oxford, Miss.—Bids until Dec. 17 to construct road; plans, etc., on file with Lafayette County Chancery Clk. and obtainable from W. D. Hedleston, Jr., Walter Valley, Miss.

Road Engineer.—City, Geo. W. Brooks, City Clk., Hendersonville, N. C.—Names and addresses competent engineers to advise as to specifications, material, etc., for most permanent road which can be built from funds available.

Roofing.—D. C. Lawrence, Sanford, N. C.—Prices on composition roof for 50 to 60-room hotel.

Screen (Gravel), etc.—Gulf Machinery & Investment Co., New Orleans, La.—Gravel screen, suction hose, etc., for gravel plant.

Sewers.—City of Tulsa, Okla., Mrs. Frank Seaman, Auditor.—Bids until Dec. 13 to construct storm sewer south side of Riverside Drive Addition.

Turntable.—Charles L. Eskridge, 124 W. Marion St., Shelby, N. C.—Prices on steel turntable for public garage.

Safes.—R. S. Clement, Box 14, Clifton, Tex. Prices on safes.

Shovel (Steam).—Atlantic Engineering Co., Suite 20 Commercial Bank Bldg., Savannah, Ga.—Dealers' prices on 18 B. Bucyrus steam shovel, preferred mounted on caterpillars, equipped with $\frac{3}{4}$ -yd. dipper; state condition and f. o. b. cars shipping point.

Smokestacks.—Samuel T. Williams, Contr. Engr., 223 N. Calvert St., Baltimore, Md.—Smokestacks.

Steel Sheets.—Joseph Stolz & Son, 843 E. 136th St., New York.—25 steel sheets, 60x144 in., No. 14 U. S. standard gauge.

Tank.—U. S. Foil Co., Louisville, Ky.—New or second-hand 55,000-gal. steel gravity tank, hemispherical bottom, for sprinkler equipment, to have 55-ft. steel tower; to comply with stock insurance requirements.

Testing Laboratory Equipment.—Southern Testing Laboratories, American Trust Bldg., Birmingham, Ala.—Manufacturers and dealers' catalogs of chemical and testing apparatus, chemical engineering materials and equipment.

Textiles, etc.—Edward Luddy & Co., 81/8 Bentinck St., Calcutta, India.—To represent mfrs. of hosiery, underwear, imitation jewelry, etc.

Textile Machinery.—R. E. White, Aulander,

N. C.—Names and addresses mfrs. cotton-ropes mchy. using water-power.

Trim.—A. D. Reynolds, 37 Fourth St., Bristol, Tenn.—White or light marble or stone cast trim for church building. (See Building Material.)

Vaults, etc.—R. S. Clement, Box 14, Clifton, Tex.—Prices on vaults and other fixtures.

Viaduct Construction.—City Comsn., Jacksonville, Fla.—Bids until Jan. 7; to construct Lee St. viaduct; reinforced concrete, including structural steel beams, roadway 40 ft., two 10-ft. sidewalks; total length, including approaches, 56 ft.; \$300,000; plans, etc., with F. M. Edwards, City Engr., and Harrington, Howard & Ash, Consol. Engrs., Jacksonville, and 1012 Baltimore Ave., Kansas City, Mo.

Vinegar-making Machinery.—James E. Feese, Mgr., Blue Mountain Food Products Co., Smithburg, Md.—Prices on mchy. to mfr. cider and vinegar.

Wire Bundlers.—See Woodworking Machinery.

Woodworking Machinery.—Fuller Lumber Co., J. J. Mallonee, Mgr., Greensboro, N. C.—New or second-hand woodworking machinery, including shook tonguing and grooving and gluing machines, wire bundlers and corrugated fastener drivers.

Railroad Construction

Railways.

La., New Orleans.—Southern Pacific Lines reported to have let contract to C. A. Lacy of Anniston, Ala., for grade revision on line between New Orleans and Houston.

Miss., Jackson.—Jackson & Eastern Railway

Co.'s application for permission to extend west from Sebastopol, Miss., to Jackson, about 50 ml., set for hearing at Jackson Dec. 13 before A. R. Mackley, special representative of the Interstate Commerce Comsn. Prest. S. A. Neville of Meridian, Miss., is reported as saying that financing is ready for construction early in 1921.

N. C., Andrews.—Carolina & Georgia Ry. has been completed from Andrews to Hayesville, N. C., 25 mi., and is being partially operated. Ballasting and surfacing in progress. John C. Arbogast, Oates Bldg., Asheville, N. C., is president and general manager.

Okla., Okmulgee.—St. Louis-San Francisco R. R., it is reported, will lay several miles of tracks to open new coal field near Okmulgee. F. G. Jonah, St. Louis, Mo., is Ch. Engr.

Okla., Sand Springs.—H. S. Shaner of Sand Springs informs the Manufacturers Record that he and others propose to build next year about 100 mi. of railroad in the Middle West, and that bids are invited.

Tex., Beeville.—A. W. Koch, representing the Friestedt Construction Co. of Houston, Tex., and Chicago, proposes construction of a railroad from Beeville to Laredo, Tex., about 125 mi.

Tex., Uvalde.—Uvalde & Northern Railroad Co. has applied to the Interstate Commerce Commission for authority to build a railroad from Uvalde to Camp Wood, Tex., 37 mi. J. F. Halpin, 317 Kampmann Bldg., San Antonio, Tex., and others interested. Contract reported let in August to L. J. Smith Construction Co. of Kansas City.

Street Railways.

Fla., St. Petersburg.—City contemplates extending street car lines at cost of about \$65,000. R. E. Ludwig is Director of Utilities.

INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

Extending Scope of Business.

The Concrete Steel Bridge Co., builder of reinforced concrete structures, Clarksburg, W. Va., announces that it has opened offices at Huntington, W. Va., with J. G. Dobie as district manager, and at Knoxville, Tenn. (19 Deaderick Bldg.), with T. W. Horner as district manager. Arrangements are practically completed for sales representation at Jackson, Miss., and it is contemplated to soon establish another branch office at Birmingham, Ala. The home office at Clarksburg has been enlarged and a new department established under the charge of A. R. Montgomery, Jr., to handle the design and construction of permanent structures for bituminous coal mines.

Will Soon Have Three Factories.

The J. H. Miner Saw Manufacturing Co., Inc., of Meridian, Miss., and Shreveport, La., has increased its capital stock to \$150,000, and is completing a new factory at Columbia, S. C., which will be in operation by January 31, according to expectations. This will give the company three electrically-equipped factories, so that it can fill orders immediately for genuine Hoe or Simonds saws, which it handles. The stock of the company is all held among employees, it is stated, Mr. Miner having decided upon this plan eight years ago, when they were incorporated. These plants repair as well as make any circular saw for sawmills or shingle mills, and, it is said, concerning their tensioning machines,

that they do the work of 20 men and do not mark or dent the saw. The Simonds people are building some special milling machines for the company.

Coal and Timber Land to Be Sold.

Announcement is made in another column of the proposed sale of 30,000 acres of coal and timber land in Kentucky, it being estimated that there are 250,000,000 tons of coal and 95,000,000 feet of timber on the property, the timber being large poplar, oak and hemlock. Particulars may be obtained from the J. G. Tilley Company, Bristol, Va.

Outlook for the Paint Trade.

A most optimistic spirit was shown at the conference of the Eastern and Western executive managers of the Devco & Reynolds Company, Inc., which took place at the Hotel Astor, New York, beginning November 23 and lasting four days. All of the 16 branches and warehouses of the organization were represented, and every question affecting the success of the business was discussed. Plans and policies for 1921 will follow joint decisions of the executives intimately in touch with the paint market, and it is stated that there is no doubt in their minds that the coming twelvemonth will be a banner year for them and for the market in general. A greatly increased production has been obtained in the

(Continued on Page 146.)

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

ONE Man Will Do All The Figuring These FOUR Men Can Do—

and do it better on the

MONROE

REG. U. S. PAT. OFF.

Calculating Machine



A FEW weeks ago in a certain engineering office of a great industrial concern were several engineers and draftsmen making computations, calculating earthwork volumes and estimating costs of various structures.

Another engineer had just finished an estimate for a huge yard—22 sheets containing items such as earthwork, spikes, cu. yds. of concrete—hundreds of items. Items and figures—four columns to a page (being chargeable to four counts)—were in pencil and totalled \$2,700,000.

The cost of every item had been computed from the unit price by LONGHAND.

The Monroe Saves 2/3 of Time

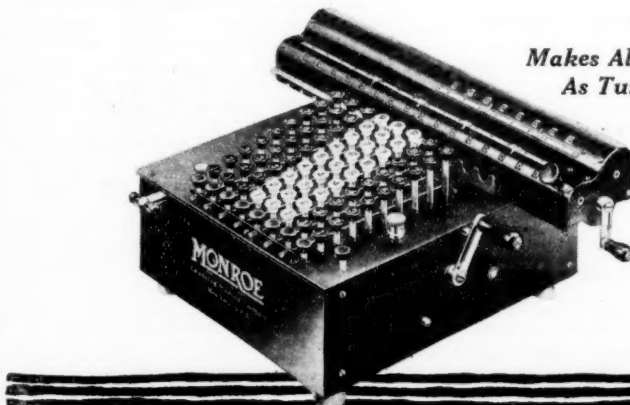
Think of the waste of effort and time when at least **TWO-THIRDS** the cost of computing these figures could have been saved by using the Monroe—the machine that not only Multiplies, but Divides,

Subtracts and Adds as easily as other machines Add! With the Monroe, the possibility of mental error is entirely eliminated, because at every step of the work you have a constant visible check of the accuracy of your calculations.

Anyone Can Operate the Monroe

Anyone with a few minutes' instruction can easily master the simple Monroe operation of depressing the keys—turning the crank forward for addition or multiplication and backward for subtraction or division—and reading the answer and the proof on the dials.

Judge for yourself whether the Monroe is the one best way to handle your figure-work. Send the coupon for a copy of "The Book of Facts," or a demonstration, and your request will be referred to the office nearest you of the 100 Monroe Branch Offices in United States and Canada.



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As Turning the Crank*

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Without obligation (check items desired):

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M. R. 12-16-20.

various manufacturing plants of the company, so that prompt service will continue to be given, notwithstanding an increased volume of sales. This conference, which proved decidedly the advantages of the many new Eastern and Western branches, was preliminary to the conference of the Eastern salesmen, announced in New York for December 6 to 8, inclusive.

Paint Prices Reduced.

The Joseph Dixon Crucible Co., Jersey City, N. J., have just announced a reduction in the price of their silica graphite paint, which is used on both metal and woodwork for protection against wear and weather. A new paint list has been issued.

Southern Sales Office Opened.

The opening of a new sales office in Atlanta, Ga., is announced by the Chicago Bridge & Iron Works, manufacturers of steel tanks, including large storage tanks and similar plate work. This office is in the Forsyth Bldg., and Joseph L. Zeller is in charge. He has been with the company for several years and will handle the business in Georgia, Alabama, Florida and Tennessee. The headquarters of the company are at 37 W. Van Buren St., Chicago, Ill.

New York Office Established.

The Falcon Steel Co. of Niles, O., announce the opening of a New York office at Room 1904, No. 18 E. 41st St., New York, with T. H. Warner as district sales manager. Mr. Warner has had offices at 220 Broadway and is severing old connections to go with this company. John D. Fitzpatrick will be transferred from the home office to be located with Mr. Warner at New York.

District Office Established.

F. L. Grant, Inc., engineers and contractors, Clarksburg, W. Va., have opened an office in Richmond, Va., in charge of Robert K. Williams, district manager, 1521 Lamb Ave. The Richmond office will pay special attention to the Southern business of the company.

Trade Literature.

A Practical Calendar.

The Matthew Addy Company of Cincinnati, with offices in seven other leading cities, have issued a clear and practical wall calendar for 1921, including also the months of December, 1920, and January, 1922, for convenient reference. It is neatly printed, with the dates of holidays in red, and the figures can be easily seen at some distance.

Fine Oil Tank and Pump Book.

A large and handsome bulletin book, substantially bound in flexible cover, has been issued by the Wayne Oil Tank & Pump Co., Fort Wayne, Ind. It covers their complete line of oil and gasoline storage systems, oil filtration and oil-burning systems, furnaces for metal melting, forging and heat treating. The bulletins it contains are richly illustrated, many of the pictures being in colors to display the products of the plant exactly as they appear when in use. The book has been published to meet the requirements of large industrial concerns and other customers, publishers, etc., who often ask for a complete catalog for their files or for library use. The bulletins are printed upon heavy, finely calendered paper, and the entire publication is prepared in the most attractive and practical manner. The first of the bulletins which it contains—No. 2—gives "a few

general rules for selecting the proper power pump for the duty to be performed," and these are followed by detailed directions showing how to figure the proper size of suction and discharge pipes. There is also a long list that covers 14 pages giving the names of representative concerns who have purchased and are using the Wayne storage-system equipment. The cover is of a rich dark-brown color of the embossed leather type.

Fine Book About Gas Engines.

"Cooper Gas Engines" is the title of a new gas-engine book issued by the C. & G. Cooper Company, Mount Vernon, O., engine builders. It is one of the best contributions ever made to the literature in this line, and speaks for the high state of development which this type of prime mover has attained. In it are illustrated many representative plants, equipped with Cooper engines, telling a convincing story of their progress. It is noted that for compressor service in the natural-gas line they are in special favor and constitute a standard unit of power. Brief descriptions of the engines accompany the pictures. It is a very fine publication in both preparation and execution.

BOOK REVIEW.

Handbook of Mexican Properties and Securities. By J. S. Curtiss. El Paso, Tex.: J. S. Curtiss & Co. Price \$5.

This book of nearly 400 pages contains "an up-to-date" list of mining properties in Mexico, together with the names of their officers and other data. It is further stated that the list of oil-well companies in the Tampico-Tuxpam district is as nearly complete as possible, and that the names of purchasing agents and field officials are also given. The directory of ranches includes the larger sugar and hemp plantations. There is also a list of cotton plantations. Old and new mining laws are presented for reference. None the less valuable is a translation of the new Constitution of the Republic of Mexico, including the much-discussed Article 27. Other information in the volume is a list of banks, bond issues of the country, a comparative statement of agricultural products during 30 years, a translation of Spanish ranch and mining terms—the latter being quite extensive—a list of Government mining agents, regulations of mining laws, etc. The author dedicates the book "To my friends, the Mexican people, among whom I have lived and worked." It is finely printed on good paper, with flexible cover.

Financial News

New Financial Corporations.

Fla., Fort Lauderdale.—First National Bank of Fort Lauderdale chartered; capital \$100,000.

Ky., Falmouth.—First National Bank of Falmouth chartered; capital \$60,000.

Md., Baltimore.—Great Western Building and Loan Assn. inceptd., 705 W. Baltimore St.; capital \$300,000; Wm. Klush, Morris Shane, Jos. Loeffler.

Md., Baltimore.—Hunter Glover & Co., 1010 Keyser Bldg., inceptd. with \$200,000 capital; Robert J. Gill, Raphael Walter, Francis Key Murray.

Miss., Jackson.—Merchants' Bank & Trust Co. has organized with H. O. Bland, Cashr.

N. C., La Grange.—La Grange Bank & Trust Co., capital \$25,000, has been inceptd. by D. W.

Wood, Prest.; W. S. Coursey, V.-P.; E. R. Burke, Cashr.

N. C., Lexington.—New Era Amusement Co., capital \$25,000, has been inceptd. by J. H. Penny, A. R. Payne, S. R. Roan.

S. C., Charleston.—Phoenix Building and Loan Assn., capital \$150,000, has been chartered by R. G. Rhett, Prest.; G. E. Buell, V.-P., and T. T. Hyde, Secy.-Treas.

Tenn., Coalmont.—Coalmont Savings Bank chartered; capital \$15,000; John E. Patton, James H. Northcut, J. C. Henley.

Tenn., Knoxville.—Tennessee Finance Corp. chartered with \$100,000 capital.

Tex., Arlington.—Farmers' National Bank of Arlington chartered; capital \$50,000.

Tex., Clifton.—Clifton National Bank, capital \$25,000, organized by C. M. Moore, Prest.; Will Manske, V.-P.; R. S. Clement, Cashr. (See Machinery Wanted—Safe, Vault, etc.)

Tex., Dallas.—Fidelity Union Casualty Co. of Dallas, capital \$200,000, organized by Ben F. Bailey, Prest.; Geo. A. Chatfield, V.-P.; J. E. Tarnest, Treas.

Tex., Oakland.—Oakland State Bank, capital \$20,000, organized; J. P. Mayes, Prest.; H. B. Mays, V.-P.

Tex., Seymour.—Seymour Abstract & Title Co., capital \$10,000, inceptd. by R. H. McDavid, W. R. Sikes, T. C. Irby, Jr.

Va., Blacksburg.—Farmers and Merchants' Bank of Blacksburg, capital \$50,000, organized by J. M. Groselce, Prest.; H. E. Argenbright, Secy.

Va., Norfolk.—Hampton Roads Fire & Marine Insurance Co., capital and surplus \$1,000,000, inceptd. by P. D. Bane, Henry G. Barbee, E. Jeff Robertson and others.

W. Va., Clothier.—Laurel Insurance Agency chartered; capital \$5000; A. E. King, D. S. Twohig, Geo. W. Mitchell.

W. Va., Gauley Bridge.—Bank of Gauley Bridge, capital \$40,000, inceptd. by Walter C. Summers, Gauley Bridge; E. L. Nuckolls, Fayetteville, W. Va.; George T. Lancaster, Glen Ferris, W. Va.

New Securities.

Ala., Bessemer.—Water.—City will vote Jan. 17 on \$675,000 bonds. Address The Mayor.

Ala., Montgomery.—Street, School and Market House.—City, C. B. Smith, City Clk., will issue \$95,000 of street, school and market house bonds.

Ark., Fort Smith.—Water.—Board of Improvement Water-works Dist. No. 1, W. F. Blocker, Secy., will receive bids until Dec. 22 on \$200,000 of 7 per cent annual mortgage bonds.

Ark., Little Rock.—Street.—Pulaski County Comms. sold \$32,062 street bonds.

Ark., Mena.—Road.—Polk County Road Dist. No. 1 issued \$175,000 of 6 per cent semi-annual \$1000 denomination bonds, dated Mch. 1.

Ark., Powhatan.—Road.—Western Lawrence County Road Improvement Dist. issued \$27,500 of 6 per cent semi-annual \$500 and \$1000 denomination bonds, dated Aug. 1.

Ark., Searcy.—Road.—White County, Beebe, Antioch and Lonohe Road Dists. issued \$17,500 of 6 per cent semi-annual \$500 denomination bonds, dated Sept. 1.

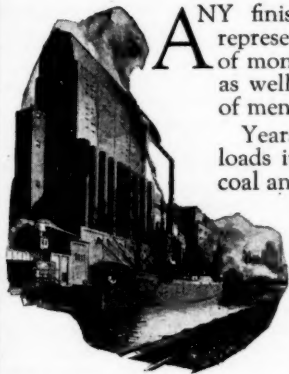
Fla., Bonifay.—Road.—Holmes County Road Dist. No. 3 issued \$37,000 of 6 per cent semi-annual \$1000 denomination bonds, dated July 4.

Fla., Boynton.—Electric, etc.—City; voted \$10,000 electric-lighting and ocean-front improvement bonds. Address The Mayor.

(Continued on Page 148.)

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Money Works!



ANY finished product represents the labor of money and credit as well as the labor of men.

Years before a ship loads its first cargo, coal and ore must be mined, steel fabricated, labor paid. The ship earns nothing until it is chartered. It never could

have been built without the labor of men, money and credit.

The vast resources of the National Bank of Commerce in New York are an essential element in commerce and industry.

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Capital, Surplus and Undivided Profits
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NOTICE

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71 Broadway

New York

RECEIVERS' SALE

OF

RAILROAD

GEORGIA

TATTNALL COUNTY

Under and by virtue of the order and decree passed in the case of L. F. Driver & Co. et. al. vs. R. J. Rogers et. al., pending in the Superior Court of said county, we will sell before the Courthouse door, in the City of Reidsville, said State and County, on the first Tuesday in January, 1921, between the legal hours of sale, to the highest bidder for cash, the railroad of the Collins & Ludowici Railroad, consisting of the main track from Collins, Ga., to Ludowici, Ga., together with all switches, sidings, turnouts, rights of way, real estate, depots, locomotives, rolling stock and all other property of every description belonging to said railroad, in the manner following, to wit:

1. That said railroad and appurtenances shall be offered for sale in sections as follows:

SECTION ONE: All that portion of said railroad lying between the most northern extremity of its main track at Collins, Georgia, and a point southwardly towards Glennville, Tattnall County, Georgia, seven miles from such northern extremity, including roadbed, real estate, rights of way, turnouts, switches, all other property of said railroad of every kind and character, including all improvements, buildings and depots between said points, being the portion of said railroad from Collins to Reidsville.

SECTION TWO: All that part of said railroad, commencing at a point seven miles southward from its most northern extremity, being the point at which Section One ends, and extending southwardly from said beginning point to a point one hundred and five and six-tenths feet towards Glennville from the depot in Mendes, a distance of ten and one-half miles southwardly from the beginning point of this section, together with all sidings, switches, depots, buildings and improvements to said section of said railroad appertaining and belonging.

SECTION THREE: All that portion of said railroad from a point one hundred and five and six-tenths feet southwardly from the depot in Mendes to the southern extremity of the switch or siding at Glennville, Tattnall County, Georgia, including all real estate belonging to said railroad and lying between the points aforesaid, and all sidings, switches, depots, buildings and other improvements to said section of said railroad belonging.

SECTION FOUR: All that portion of said railroad lying between a point one hundred yards southwardly from the southern extremity of the present switch or siding at Glennville, Tattnall County, Georgia, and extending to a point two hundred feet south of the Water Tank at Ludowici, Georgia, approximately nineteen miles, including all rights of way and real estate belonging to said railroad, lying between the points aforesaid, with all sidings, switches, turnouts, depots, buildings, structures and improvements to said railroad belonging.

SECTION FIVE: All equipment of said railroad, consisting of two locomotives, one coach, tools and all other equipment belonging to said railroad.

Bids for said sections of said railroad will be received in two ways: One under which the purchaser or purchasers will agree to operate any section or sections of said railroad purchased, and the other, under which said sections of said railroad are to be dismantled and the same removed.

2. Said receivers shall then sell said railroad as an entirety, consisting of the railroad from Collins, Georgia, to Ludowici, Georgia, consisting of roadbed, rights of way, all real estate, sidings, switches, turnouts, depots, structures, improvements and equipment of all kinds and all other kinds of property belonging to said railroad.

Bids for said entire property shall be received in two ways: One under which the purchaser or purchasers will undertake to operate said railroad as a going concern, and the other under which the purchaser or purchasers will have the right to dismantle said railroad and remove and sell the materials of which the same is constructed and to sell and dispose of all the other property belonging to said railroad.

3. All bids for said property, whether in sections or as a whole, and whether for operation or dismantlement, will be subject to rejection or confirmation by the Court as the Court may deem best.

4. Said receivers will require from each of the bidders a certified check for five per cent. of the amount which such bidder or bidders propose to bid for any section, portion or the whole of said property, as above specified, which shall be forfeited if such bid or bids are accepted and the bidder or bidders fail to comply with the terms of their bids.

5. Unless the aggregate of the highest bids for said portions of said railroad, or unless the highest bid for the property as a whole, shall amount to Eighty-five Thousand Dollars, which is hereby fixed as the upset price of said property, no bids will be entertained by the Court.

This December 10, 1920.

M. S. LEWIS,
J. V. KELLEY,
Receivers, Reidsville, Georgia.

Fla., Chipley—Sewer and Water.—City issued \$30,000 of 5 per cent semi-annual \$1000 denomination bonds, dated July 1. Address The Mayor.

Fla., Jacksonville—Dock and Drainage.—City will issue \$1,000,000 terminal and \$175,000 drainage bonds; proposed. Address The Mayor.

Fla., Tavares—Road.—Lake County Good Roads Assn. will issue \$500,000 bonds.

Ga., Carnesville—Drainage.—Franklin County Drainage Dist. has issued \$25,000 of 6 per cent semi-annual \$1000 denomination bonds, dated July 1.

Ga., Cumming—Drainage.—Comms. Big Creek Drainage Dist. No. 1 in Forsyth and Milton Counties, S. H. Allen, Secy.-Treas., will receive bids until Dec. 20 on \$16,064 of 6 per cent bonds, dated July 1; payable on Jan. 1 and annually on that date each year thereafter; principal of one bond, \$1664, due Jan. 1, 1923, and of others, \$1600 each, on that date each year thereafter until all are paid.

Fla., Green Cove Springs—Road and Bridge. Clay County, Special Road and Bridge Dist. No. 2, issued \$950 of 6 per cent semi-annual \$500 denomination bonds, dated July 1.

Fla., Kissimmee—Lake Front.—City issued \$34,000 of 6 per cent semi-annual \$1000 denomination bonds, dated Apr. 13. Address The Mayor.

Fla., Macclenny—Road and Bridge.—Baker County Road and Bridge Dist. No. 1 issued \$15,000 of 5 per cent semi-annual \$1000 denomination bonds, dated July 1.

Fla., Pensacola—School.—Escambia County Comms. issued \$20,000 of 5½ per cent semi-annual \$1000 denomination bonds, dated July 1.

Fla., St. Petersburg—Car Extension.—City Comms. contemplate voting on \$65,000 bonds.

Ga., Bainbridge.—City has called off election

on \$125,000 bonds for street, sewer and school. Address The Mayor. (Lately noted to vote.)

Ga., Decatur—School and Water.—Town, W. H. Ehle, Clk., has sold \$150,000 of 5 per cent bonds as follows: \$100,00 school and \$50,000 water to J. R. Hilsman & Co., Atlanta, Ga. (Lately noted inviting bids.)

Ga., Hartwell—Drainage.—Hart County Shoal Creek Drainage Dist. issued \$25,000 of 8 per cent annual \$500 denomination bonds, dated Jan. 2.

Ga., Kirkwood—School.—Town, O. O. Ray, Clerk, has voted \$50,000 of 6 per cent 25-year bonds.

Ga., Manchester—Street, Sewer, Water and Electric.—City has voted \$50,000 bonds. Address The Mayor.

Ga., Savannah—Street.—City, M. M. Steuart, Mayor, will issue \$27,201.70 bonds to provide funds for city's share of cost of paving Habersham and Thirty-seventh Sts.; divided into three loans of \$11,367.30, \$8188 and \$7646.40; denominations to vary from \$500 to \$64.64; maturity begin Sept. 15, 1921, and continue each successive year until entire number are redeemed.

Ga., Valdosta—Roads.—Lowndes County Comms. will receive bids until Dec. 15 on \$50,000 of bonds.

Ky., Owensboro—Street.—City, John C. Calhoun, Mayor, has called off election for issuing \$40,000 bonds; will not be held until Nov., 1921. (Lately noted.)

Ky., Owensboro—School.—City, Board of Education, J. J. Sweeney, Pres., will vote Jan. 22 on \$300,000 bonds. (Supersedes recent item.)

La., Bastrop—School.—Morehouse Parish, McGinty School Dist., issued \$12,000 of 5 per cent semi-annual \$500 denomination bonds, dated May 1.

La., Bastrop—School.—Morehouse Parish, Jones School Dist., issued \$8000 of 5 per cent

semi-annual \$500 denomination bonds, dated June 1.

La., De Ridder—Road.—Beauregard Parish Police Jury has sold the following 5 per cent bonds to Caldwell & Co., Nashville, Tenn.: \$142,000 Road Dist. No. 2, \$92,000 Road Dist. No. 4 and \$93,000 Road Dist. No. 6; semi-annual, \$500 denomination, dated Sept. 1.

La., Jennings—Drainage.—Jefferson Davis Parish, Thornwell Drainage Dist., issued \$15,000 of 5 per cent semi-annual \$500 denomination bonds, dated Oct. 1.

La., Kaplan—Ice and Cold Storage.—Town will issue \$40,000 bonds. Address The Mayor.

La., Oak Grove—School.—West Carroll Parish voted \$35,000 bonds in Eighth Dist.; 5 per cent 20-yr. bonds.

La., Opelousas.—City has sold \$250,000 improvement bonds to H. D. Larcade, Jr.

Md., Annapolis—Memorial and Road.—State Board Public Works will invite new bids on \$2,500,000 State bonds, to include \$500,000 memorial and State property and \$2,000,000 road bonds; all 4½ per cent, dated Feb. 15, except \$500,000 road bonds. (Previously noted rejecting bids.)

Md., Elkton—Road.—Cecil County Commissioners, Philip M. Grove, Clerk, has sold \$50,000 of 5 per cent semi-annual 24½-year bonds to Elkton Banking & Trust Co. at par. (Supersedes recent item.)

Md., Frederick—Road, etc.—State Board Public Works will issue \$2,500,000 State securities.

Miss, Greenwood—Road.—Leflore County voted \$300,000 of 6 per cent road bonds; replace previous issue of \$300,000. Address County Comms.

Miss, Jackson.—State Bond and Improvement

(Continued on Page 150.)

To The Readers of
The Manufacturers Record

ADDITIONAL TAX BURDENS - ?

November 4th, 1920.

Have you overpaid your tax? Have you paid a larger percentage than other corporations in similar business? Have you received an assessment for additional tax for the years 1917, 1918 and 1919? If so, you may be entitled to relief under the remedial provisions of the law and it is unquestionably to your advantage to make all adjustments before the Government discovers errors. It makes your case one hundred (100%) percent stronger.

Have you filed claims for Rebates-Refunds? Are you fully satisfied with the status of said claims? Would not personal supervision and follow up before Department insure prompter settlement?

We maintain a Legal Department in Washington, D. C., and have associated with us Mr. Ellis C. Johnson, twenty-five (25) years, General Counsel, Legal Advisor and Solicitor of the Bureau of Internal Revenue. Mr. Johnson has successfully handled more claims before the Department than any man in the country. Mr. George B. Furman and Mr. Johnson give their attention to the preparing and follow up of all our claims.

As Ex-Government Officials, with years of experience, with ability to see, and capacity to analyze the Tax Laws, Rules and Regulations from the Washington Viewpoint, we offer a most unique service, a service needed by the Taxpayers, to the end that they obtain every deduction permissible under the Law. Allow us to review your Federal Income and Excess Profits Tax Returns.

Hoping that we shall be favored with your valued business, which if entrusted to us shall receive our prompt, careful and most thorough attention, we are,

Yours very truly,
ROBERTSON, FURMAN & MURPHY, INC.

R. W. Robertson
President

Suite 204
Singer Building,
New York, N. Y.



Capital and Surplus
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Total Resources
\$38,000,000

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BONDS

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We invite correspondence with City, County or other officials that have
bonds, etc., for sale; also contractors who have taken securities in exchange
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PORTLAND, ME.

Comsn. authorized sale of \$1,000,000 bonds for improving grounds of several State colleges and institutions; 1920 Legislature authorized sale of about \$5,000,000 of 5½ per cent bonds, \$1,000,000 of which have been sold.

Miss., Macon—Street, Light and Water.—City, J. J. Scott, Clerk, will receive bids until Dec. 18 on \$25,000 of 6 per cent semi-annual \$500, \$1000 and \$1200 denomination light and water bonds, dated Nov. 18, and \$18,000 of 6 per cent semi-annual \$360, \$720 and \$900 denomination street bonds, dated Nov. 18. (Lately noted voting bonds.)

Miss., Moss Point—Bridge.—City has sold \$10,000 bonds. Address The Mayor.

Mo., Cassville—Road.—Barry County, Wheaton Special Road Dist., sold \$25,000 of 6 per cent semi-annual \$500 denomination bonds, dated Nov. 1, to First National Bank of St. Louis, Mo.

Mo., Springfield—School.—Greenfield School Dist. has voted \$40,000 bonds.

Mo., Stockton—Road.—Cedar County, Eldorado Springs Road Dist. issued \$20,000 of 6 per cent semi-annual \$1000 denomination bonds, dated April 1.

N. C., Burlington—Street, Sidewalk and Water.—City, M. W. McPherson, Treas., will receive bids until Dec. 29 on \$47,000 of 6 per cent semi-annual \$500 denomination bonds, dated Dec. 1, including \$25,000 water, \$12,000 street and \$10,000 sidewalk.

N. C., Carthage—Highway.—Moore County Comms., H. P. McPherson, Chrmn., sold \$65,000 of 6 per cent semi-annual bonds, dated Jan. 1 to Seasongood & Mayer, Cincinnati, O. (Lately noted inviting bids.)

N. C., Dobson—Road and Bridge.—Surry County Comms., Henry Wolfe, Clerk, will receive bids until Jan. 6 on \$100,000 of 6 per cent \$1000 denomination 15-year bonds as follows: \$75,000 road and \$25,000 bridge bonds. (Lately noted inviting bids Dec. 6.)

N. C., Greensboro—School.—Guilford County Comms., W. C. Tucker, Chrmn., will vote Jan. 18 on \$600,000 school bonds.

N. C., Greenville—Water, Light and Funding.—Town, A. H. Taft, Treas., will receive bids until Jan. 10 on \$100,000 of 6 per cent semi-annual \$1000 denomination bonds, dated Dec. 1, including \$65,000 water and light and \$35,000 funding bonds.

N. C., Hendersonville—Street.—City, Geo. W. Brooks, City Clk., will issue \$250,000 bonds.

N. C., Highland—School.—Town, Chas. E. Hefner, Clk. and Treas., will receive bids until Jan. 3 on \$35,000 of 6 per cent semi-annual bonds, dated Jan. 1.

N. C., Kings Mountain—Street.—City issued \$18,000 of 6 per cent semi-annual \$1900 denomination bonds, dated Nov. 1. Address The Mayor.

N. C., Kinston—Road.—Lenoir County Comms., John H. Dawson, County Treas., will receive bids until Jan. 3 on \$700,000 of 6 per cent semi-annual \$1000 denomination bonds, dated June 1; due \$60,000 on June 1 in each of the years 1935 to 1939 inclusive, and \$80,000 on June 1 in each of the years 1940 to 1944 inclusive.

N. C., Lillington—Road.—Harnett County, Lillington Township, issued \$8000 of 6 per cent \$500 denomination bonds, dated Jan. 1.

N. C., Monroe—Road and Bridge.—Union County Comms., M. C. Long, Clk., will receive bids until Dec. 20 on \$200,000 of 6 per cent semi-annual \$1000 denomination bonds, dated Dec. 1.

N. C., Raleigh—Sewer.—City, J. B. Bray, Commr. Public Works, will issue \$100,000 bonds.

N. C., Rocky Mount—Gas.—City, C. H. Harris, Clk., will receive bids until Dec. 16;

\$160,000 of 5½ per cent or 6 per cent semi-annual \$1000 denomination bonds.

N. C., Tarboro—Refunding, etc.—City, J. H. Jacobs, Clk., will receive bids until Dec. 21 on \$200,000 of 6 per cent 15½-yr. public-improvement and \$20,000 of 6 per cent 15½ refunding bonds.

N. C., Yanceyville—Road.—Caswell County Comms., Robert T. Wilson, Clerk, sold \$50,000 of 6 per cent \$1000 denomination 17½-year bonds, dated Oct. 1, to Prudden & Co., Toledo, O., at 100.02. (Previously noted inviting bids.)

N. C., Washington—Road.—Beaufort County Road Comsn., Frank C. Kugler, Chrmn., will receive bids until Jan. 13 on \$500,000 of 5½ or 6 per cent semi-annual bonds, dated Jan. 1.

N. C., Washington Bridge.—Beaufort County Comms., C. P. Aycock, Chrmn., will receive bids until Jan. 13 on \$100,000 of 5½ or 6 per cent semi-annual bonds, dated Jan. 1.

N. C., Wilmington—Ferry.—New Hanover County Comms., Thos. K. Woody, Clk., will receive bids until Jan. 10 on \$50,000 of 6 per cent semi-annual \$1000 denomination bonds, dated Jan. 1, maturing \$2000 annually Jan. 1, 1923 to 1932 inclusive; \$3000 annually Jan. 1, 1933 to 1938 inclusive and \$4000 annually Jan. 1, 1939 to 1941 inclusive.

N. C., Winston-Salem—Street.—City, W. H. Holcomb, Clk., will issue \$231,568.55 bonds.

N. C., Winston-Salem—Abattoir.—City, W. H. Holcomb in charge, will issue \$150,000 bonds.

Okla., Blackwell—Street.—City issued \$40,000 of 7 per cent annual \$500 denomination bonds.

Okla., Enid—Street.—City issued \$45,000 of 6 per cent semi-annual \$500 denomination bonds. Address The Mayor.

Okla., Heavener—Sewer.—City issued \$36,000 of 6 per cent semi-annual \$1000 denomination bonds, dated April 1. Address The Mayor.

Okla., Oklahoma City—Channel.—City will issue \$1780 bonds. Address The Mayor.

Okla., Woodward—School.—Woodward County School Dist. No. 2 issued \$12,000 of 5½ semi-annual \$500 denomination bonds, dated July 15.

S. C., Rock Hill.—City, S. Geo. Moore, Clk., has sold \$100,000 of 6 per cent semi-annual denomination bonds, dated Jan. 1, to J. H. Hilsman & Co., Atlanta, Ga., at par and accrued interest. (Lately noted inviting bids.)

Tenn., Columbia—Roads.—Maury County Comms. voted \$300,000 road bonds.

Tenn., Manchester—Water.—Town will receive bids until Dec. 20 on \$45,000 of 6 per cent annual \$500 denomination bonds. Address The Mayor.

Tenn., Maryville—Road and School.—Blount County Comms., R. P. McReynolds, County Judge, will receive bids until Dec. 15 on \$150,000 of 5 per cent semi-annual \$1000 denomination 25 and 35-year road bonds and \$50,000 of 5 per cent semi-annual \$1000 denomination 20-year bonds.

Tenn., Nashville—Sewer and Hospital.—City Comsn. will issue \$250,000 bonds, including \$200,000 sewer and \$50,000 hospital bonds.

Tenn., Nashville—Memorial.—State Memorial Comsn. will sell \$2,000,000 bonds.

Tex., Abilene—Sewer.—City, D. Scarborough, Mayor, issued \$100,000 of 5 per cent \$1000 denomination bonds, \$25,000 due each 12 yrs. (Lately noted.)

Tex., Breckenridge—Street and Sewer.—City voted \$550,000 bonds; including \$300,000 street and \$250,000 sewer. Address The Mayor. (Lately noted to vote.)

Tex., Brenham—Street.—City, A. A. Hacker, Mayor, will vote Dec. 20 on \$40,000 street bonds. (Lately noted voting Dec. 16.)

Tex., Canadian—School.—School Board, W. A. Stigler, Supt., will vote on \$43,000 bonds.

Tex., Clarendon—School.—State has registered Donley County \$3200 Common School Dist. No. 4 5-40-year bonds, dated Nov. 23.

Tex., Crisp—School.—Crisp School Dist. has sold \$12,000 bonds.

Tex., Cushing—School.—Cushing Independent School Dist. issued \$15,000 of 5 per cent bonds.

Texas, Houston—Drainage.—Harris County Comms. will invite bids on \$140,000 bonds.

Tex., Longview—Road.—Gregg County Commissioners will issue \$100,000 of 5½ per cent serial bonds.

Tex., Farmersville.—State has registered \$2000 of 10-17-year bonds, dated Nov. 23.

Tex., Henrietta—Street.—City has voted \$35,000 street bonds. Address The Mayor.

Tex., Linden—Road.—Cass County Comms. will vote Dec. 14 on \$60,000 bonds of Road Dist. No. 1.

Tex., Port Arthur—School.—Port Arthur Independent School Dist. will receive bids until Dec. 13 on \$27,000 of 5 per cent bonds.

Tex., Sierra Blanca.—Hudspeth County Commissioners issued \$15,000 of 5½ per cent semi-annual \$1000 denomination bonds, dated May 12.

Tex., Stephenville—School.—State has registered \$2200 Erath County Common School Dist. No. 16½ of 10-20-year bonds, dated Nov. 27.

Tex., Sulphur Springs—Levee.—Hopkins County Levee Improvement Dist. No. 3 issued \$60,000 of 6 per cent semi-annual \$1000 denomination bonds, dated Oct. 1.

Tex., Sweetwater—Electric.—City Comsn. plan voting on bonds.

Tex., Wichita Falls—Water.—City, W. D. Cline, Mayor, issued \$200,000 bonds.

Tex., Woodville—School.—Woodville Independent School Dist. has voted \$75,000 bonds.

Va., Danville—Street.—City plans issuing \$300,000 bonds. Address The Mayor.

Va., Roanoke—Street, Sewer, Drain and Market.—City Comsn., W. P. Hunter, City Mgr., will receive bids until Dec. 18 on \$650,000 of 4½ per cent \$1000 denomination bonds, dated Jan. 1, including \$400,000 street, \$150,000 sewer and \$100,000 drain and market bonds; these bonds are part of issue authorized last year.

W. Va., Ceredo—School.—Independent School Dist. of Ceredo will vote on \$125,400 bonds.

W. Va., Grafton—Road.—Taylor County Comms., T. S. Scanlon in charge, sold \$1,000,000 of 5 per cent \$500 denomination serial bonds, dated June 1, to State of West Virginia at par and accrued interest; these bonds were voted in the spring.

Financial Notes.

Ala., Foley.—Foley State Bank increases capital from \$10,000 to \$25,000.

Ky., Ashland.—Ashland Building and Loan Assn., John H. McCleary, Pres., has increased capital from \$2,000,000 to \$3,000,000.

Ky., Louisville.—Jefferson Savings and Building Assn., Leon P. Lewis, Pres.; increases capital from \$3,000,000 to \$5,000,000.

Tenn., Memphis.—A savings department will be added to the Industrial Bank & Trust Co. of Memphis. The new dept. will be opened about Dec. 15.

Va., Woodstock.—Shenandoah National Bank, E. D. Newman, Pres., increased capital from \$25,000 to \$30,000. (Supersedes recent item.)

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.



Bids close January 7, 1921.

TREASURY DEPARTMENT. Supervising Architect's Office, Washington, D. C., December 9, 1920. Sealed proposals will be opened in this office at 3 P. M. January 7, 1921, for New Fire Service Mains, etc., at the United States Marine Hospital, New Orleans, La., in accordance with specification and drawing, copies of which may be had at this office or at the office of the Custodian, New Orleans, La., in the discretion of the Supervising Architect, JAS. A. WETMORE, Acting Supervising Architect.

Bids close January 3, 1921.

TREASURY DEPARTMENT. Supervising Architect's Office, Washington, D. C., December 1, 1920. Sealed proposals will be opened in this office at 3 P. M. January 3, 1921, for New Hot-water Piping, etc., in the United States Mint, Philadelphia, Pa., in accordance with specification and drawing, copies of which may be had at this office or at the office of the Custodian, Philadelphia, Pa., in the discretion of the Supervising Architect, JAS. A. WETMORE, Acting Supervising Architect.

Bids close December 27, 1920.

SEALED PROPOSALS will be received until 2 o'clock P. M. December 27, 1920, at the office of the Constructing Quartermaster, Langley Field, Hampton, Va., and then opened, for additional construction and alterations of Dirigible Balloon Hangars at Langley Field. Plans and specifications obtainable at the office of the Constructing Quartermaster, Langley Field, Va. Ten dollars deposit required for plans and specifications.

Bids close December 22, 1920.

PROPOSALS FOR FURNISHING SOUTHERN Yellow-pine Lumber, Doors, Windows, Hardware, etc. Office Mississippi River Commission 1st and 2d Districts, Custom-house, Memphis, Tenn. Sealed proposals will be received here until 11 A. M. December 22, 1920, and then opened, for furnishing and delivering Southern yellow-pine Lumber, doors, windows, hardware, etc. Further information on application.

Bids close December 30, 1920.

PROPOSALS FOR BENCH DRILLS. Power Hack-saw, Lathe, Planer and Joiner, Arbor Press, Bandsaws, Brass, Bronze, Copper, Lead, Bearing Metal, Iron or Steel Ridger Roll, Solder, Tin, Iron or Steel Pipe, Track Bolts, Nails, Locknuts, Chain Shackles, Arc Controls, Copper Cable, Copper Wire, Bronze Wire, Steel Conduit, Fuses, Shade Holders, Porcelain Knobs, Mica, Attachment Plugs, Receptacles, Reflectors, Battery Renewals, Battery Zincs, Oars, Signal Flags, Steam Packing, Manila Rope, Twine, Felt, Horn Fiber, Floor Brushes, Silverware, Paper Clips, Pen Points, Onion-skin Paper, Lumber and Millwork. Sealed proposals will be received at the Office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10 o'clock A. M. December 30, 1920, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and information relating to this Circular (1427) may be obtained from this office or the offices of the Assistant Purchasing Agent, 24 State Street, New York City; 606 Common Street, New Orleans, La., and Fort Mason, San Francisco, Cal.; also from the United States Engineer Offices in the principal cities throughout the United States. A. L. FLINT, General Purchasing Officer.

Bids close January 3, 1921.

PROPOSALS FOR ANVILS, HACK-SAW Blades, Scythe Blades, Bits, Carpenters' Braces, Chisels, Glass Cutters, Bolt Dies, Breast Drills, Drills, Files, Hammers, Rakes, Reamers, Shovels, Taps, Wrenches, Ball Bearings, Paint Brushes, Coal Baskets, Bed Castors, Lantern Globes, Asbestos Gloves, Leather Gloves, Deck Scrub-brush Handles, Ax Handles, Hammer Handles, Screws, Hinges, Locks, Padlocks, Bed Springs, Poultry-netting Staples, Oil Stones, Scythe Stones, Tacks, Steel Taps, Emery Cloth, Steel Wool, Wooden Chair Seats and Beeswax. Sealed proposals will be received at the office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10:30 o'clock A. M. January 3, 1921, at which time they will be opened in

public, for furnishing the above-mentioned articles. Blanks and information relating to this circular (1428) may be obtained from this office or the offices of the Assistant Purchasing Agent, 24 State Street, New York City; 606 Common Street, New Orleans, La., and Fort Mason, San Francisco, Cal.; also from the United States Engineer Offices in the principal cities throughout the United States. A. L. FLINT, General Purchasing Officer.

Bids close December 21, 1920.

PROPOSALS FOR BRASS TUBING, COPPER Tubing, Steel Tubing, Cocks, Valves, Ship Augers, Carpenters' Clamps, Breast Drills, Drills and Countersinks, Sledge Hammers, Bridge Reamers, Saws, Wrenches, Eye and Ring Bolts, Steel Cutters, Gate Hooks, Awning Pulleys, Screws, Condulets, Battery Coppers, Conduit Elbows, Running Light Indicators, Watthour Meters, Lamp Sockets, Pushcarts, Lamp Cord, Brushes, Aluminum Ware, Ink Eradicator, Gunned Labels, Sand-paper, Wheat Bran, and Steel Rails. Sealed proposals will be received at the office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10:30 o'clock A. M. December 21, 1920, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and information relating to this Circular (1426) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City; 606 Common Street, New Orleans, La., and Fort Mason, San Francisco, Cal.; also from the United States Engineer Offices in the principal cities throughout the United States. A. L. FLINT, General Purchasing Officer.

Bids close January 10, 1921.

\$400,000 4½% Dock and Belt Railroad Improvement Bonds

PRINCIPAL AND INTEREST PAYABLE IN GOLD. Pensacola, Fla.

Sealed bids will be received by the Board of Commissioners of the City of Pensacola, Florida, from December 2, 1920, to 12 o'clock noon of January 10, 1921, for all or any part of the City of Pensacola \$400,000 4½ per cent dock and belt railroad improvement bonds for delivery to purchasers February 1, 1921. Said bonds being thirty-year bonds, dated January 1, 1920. Copy of opinion of John C. Thomson, Attorney, New York, will be furnished successful bidder.

Bids must be on form of proposal furnished by the City of Pensacola.

The right is reserved to reject any or all bids. For further particulars address the United States Mortgage & Trust Company, 55 Cedar Street, New York, N. Y., or the undersigned.

F. D. SANDERS,
Mayor, City of Pensacola.

Attest:
L. E. HEINBERG,
City Clerk.

Bids close January 6, 1921.

\$100,000 6% Road and Bridge Bonds

Dobson, N. C.
On the 6th day of January, 1921, at 12 o'clock M., the following county bonds will be offered for sale publicly, to wit: Seventy-five Thousand Dollars (\$75,000) of good road bonds, bearing 6 per cent. interest, payable semi-annually from the date of issue, in denomination of One Thousand Dollars (\$1000), the time of maturity being fifteen years. At the same time Twenty-five Thousand Dollars (\$25,000) of bridge bonds will be sold publicly, bearing 6 per cent. interest, payable semi-annually from date of issue, the maturity of these bonds being fifteen years. The place of sale at the Courthouse in Dobson, N. C.

Sealed bids will be received by Henry Wolfe, Clerk of the Board of Commissioners at Dobson, up to the hour of the sale. A certified check, One Thousand Dollars (\$1000), required by each bidder to accompany his bid. The right is reserved to reject any or all bids.

By order of the Board of Commissioners.
December 7, 1920.

W. W. THOMAS,
Chairman.

Bids close January 12, 1921.

\$1,112,000 5% Road Bonds

OUACHITA PARISH, LOUISIANA.

Monroe, La.

Sealed bids will be received up to 12 M. January 12, 1921, by the Police Jury of the Parish of Ouachita, State of Louisiana, Monroe, La., for the purchase of \$1,112,000 of Road District Number One bonds.

The bonds will be dated February 1, 1920, bear 5 per cent. per annum interest, payable semi-annually on the first day of February and the first day of August. The bonds will be in denominations of \$1000 each.

Interest and principal will be paid at the National Bank of Commerce, New York City. A certified or cashier's check for at least \$2,800, payable to J. M. Breard, Jr., president of the Police Jury, must accompany each bid.

The Police Jury reserves the right to reject any or all bids.

(Signed) J. M. BREARD, JR.,

President of Police Jury.

W. A. O'KELLY,
Clerk of Police Jury.

Bids close January 6, 1921.

\$100,000 5% School Bonds

Sealed bids will be received by the Rome City Commission until 7:30 o'clock P. M. on Thursday, January 6, 1921, for One Hundred Thousand Dollars (\$100,000) of Public School Improvement Bonds of the City of Rome, Georgia, of the denomination of one Thousand Dollars (\$1000) each, and bearing interest at the rate of five per cent. (5%) per annum, payable semi-annually. Five of said bonds payable at the expiration of ten years from date of issue, and ninety-five of said bonds payable five each succeeding twelve months, as per consecutive numbers. Bids will be received for all of said issue or for any part thereof. The Commission reserves the right to reject any or all bids. Each bid must be accompanied by a certified check for one thousand dollars (\$1000) as a guarantee of good faith. Bids may be sent to either of the undersigned.

ISAAC MAY, Chairman.

Rome, Georgia.

S. F. MAGRUDER, Secretary.

Rome, Georgia.

Bids close January 7, 1921.

Viaduct

Jacksonville, Fla.

Sealed bids will be received up to 2:30 o'clock P. M. on Friday, January 7, 1921, by the City Commission of Jacksonville, Florida, for the construction of the Lee Street Viaduct.

The viaduct is of reinforced concrete, including structural steel beams; roadway 40 feet; two 10-foot sidewalks; total length, including approaches, 1056 feet.

The work will be let under a cost-plus-a-fee contract with a guaranteed maximum. With each bid there shall be a certified check on a Jacksonville bank for \$10,000, made payable to John S. Rond, Chairman. This check will be forfeited as liquidated damages by the bidder if he is awarded the contract and fails promptly to execute the contract and bond, or will be returned to him upon such execution. Checks of other bidders will be returned promptly.

The contract will be awarded to the lowest competent responsible bidder, but the Commission may reject any or all bids and waive formalities. A bond satisfactory to the Commission for 20 per cent. of the contractor's estimated cost will be required. Each bid shall be addressed to the City Commission, Jacksonville, Fla., and be delivered through mail or otherwise at the office of the secretary, Room 13, City Hall, Jacksonville.

Plans and specifications are now on file in the offices of F. M. Edwards, City Engineer, and of Harrington, Howard & Ash, Consulting Engineers, at Jacksonville, Florida, and 1012 Baltimore Ave., Kansas City, Mo. Copies may be secured from the Consulting Engineers at Kansas City, Mo., by depositing \$25. Such copies shall be returned and a refund of \$20 made.

Bids close December 20, 1920.

\$16,064 6% Bonds

Cumming, Ga.
The undersigned Commissioners of Big Creek Drainage District No. 1, in Forsyth and Milton counties, in the State of Georgia, will receive bids at the Bank of Cumming, in Forsyth County, in said State, up to 12 o'clock noon on Monday, the 20th day of December, 1920, for ten validated and confirmed bonds of said district, amounting to \$16,064, dated July 1, 1920. Interest at 6 per cent. per annum from date, payable on the first day of January, 1921, and annually on that date each year thereafter, the principal of one of said bonds, \$1664, due January 1, 1923, and of the others, \$1600 each, on that date each year thereafter until all are paid. The right to reject any and all bids reserved. Dec. 7, 1920.

J. B. DURHAM,
Commissioner.
J. W. SHIRLEY,
Commissioner.
S. H. ALLEN,
Commissioner.

Bids close January 19, 1921.

School Buildings

BOARD OF EDUCATION,
1401 New York Telephone Bldg.,
Buffalo, N. Y.

Pursuant to Subdivision 8 of Section 875 of the Education Law, sealed proposals for furnishing the labor and material required in the construction of the following school buildings, located in the City of Buffalo, N. Y., are invited and will be received by the Board of Education at its office, 1401 Telephone Building, Buffalo, N. Y., until 2 o'clock P. M. January 19, 1921, at which time said proposals will be publicly opened and read:

- A—Primary School Building, District No. 21, located on Amherst street at Park Lake avenue.
- B—Addition to Elementary School No. 21, located on Hertel avenue between Delaware avenue and Camden avenue.
- C—Elementary School Building, District No. 9, located on Poplar street at Doat street.
- D—Elementary School Building, District No. 1, located on Porter avenue at Niagara street.
- E—Addition to Elementary School No. 60, located on Ontario street at Saratoga street.
- F—Intermediate School No. 6, located on Northampton street east of Fillmore avenue.
- G—Intermediate School No. 2, located on Hertel avenue at Shoshone street.
- H—Intermediate School No. 7, located on Roslyn street (extended) at Lang avenue.
- I—Intermediate School No. 8, located on South Elmwood avenue at Tupper street.
- J—Intermediate School No. 9, located on Sherman street at Lovejoy street.
- K—Intermediate School No. 11, located on Moreland street at Bailey avenue.
- L—Intermediate School No. 12, located on Lorraine avenue, near Abbott road.

Instructions to bidders and other information, together with plans and specifications for the three buildings noted under A, B and C above, may be procured on and after November 9, 1920, from the office of the Associated Buffalo Architects, Inc., Room No. 40, No. 232 Delaware avenue, Buffalo, N. Y. Plans and specifications for the three buildings noted under D, E and F above may be procured from the same source on and after December 1, 1920, and plans and specifications for the remaining Intermediate School Buildings noted under G to L, inclusive, may be procured on and after December 15, 1920.

A deposit of fifty dollars (\$50) will be required on each set of plans taken from the office of the architects, which sum will be repaid upon return of said documents intact and in good condition to the architects not later than February 1, 1921.

To be entitled to consideration the proposals must be made upon the forms provided by the architects, which must be fully completed and must be delivered to the Board of Education not later than 2 o'clock P. M. January 19, 1921.

All bids must be without conditions inserted by the bidder or limitations by letter or otherwise.

Security to accompany bid must be furnished by all bidders as provided in bid form. The Board of Education reserves the right to reject any and all bids.

JAMES STORER,
Secretary.

Bids close January 6, 1921.

Miami River Bridge

AT AVENUE G, MIAMI, FLORIDA.

Sealed proposals, to be filed with the city clerk, will be received by the City of Miami, Florida, up to 7.30 P. M. January 6, 1921, for the construction of a bridge over the Miami River at Avenue G. The bridge is a double-leaf steel bascule span with piers and embankment approaches. The clear span is 115 feet; the total length of improvement 495 feet. One 30-foot roadway; two 6-foot walks. Reinforced concrete bascule piers and retaining walls.

Bids upon a lump-sum basis and also upon a cost-plus-a-fee basis will be considered. With each bid there shall be a certified check for at least 10 per cent. of the bid, made payable to the city treasurer; this check will be forfeited as liquidated damages by the bidder if he is awarded the contract but fails promptly to execute contract and bond, or will be returned to him upon such execution. Checks of other bidders will be returned promptly. The contract will be awarded to the lowest competent, responsible bidder, but the city may reject any or all bids, adopt either form of bid and waive informalities.

Plans and specifications may be examined in the offices of Chas. W. Murray, city engineer, Miami, Fla., and of Harrington, Howard & Ash, consulting engineers, at Jacksonville, Fla., and 1012 Baltimore Avenue, Kansas City, Mo. Copies may be secured from the consulting engineers at Kansas City by depositing \$25. Such copies shall be returned and refund of \$20 made.

Bids close January 3, 1921.

Brick School Building

Rosedale, Miss.

The Trustees of the Rosedale Consolidated School, Rosedale, Mississippi, invite sealed proposals to erect and complete a brick school building, to be located in the Town of Rosedale, Mississippi, as per the plans and specifications prepared by Alsop & Callanan, Architects; Sleg & Mandeville, Associates, of 764 Randolph Building, Memphis, Tennessee.

Proposals must be signed by the bidders and left before 2 P. M. on the third day of January, 1921, with Mr. George McGee, Chairman Board of Trustees, Rosedale, Miss., with a certified check of \$1000, made payable to the Board of Trustees, and made in good faith that the proposal will be carried out.

The successful bidder will be required to make bond in amount of 100 per cent. of the contract price, to be made through some bonding company that is authorized to do business in the State of Mississippi, and must be made within ten days from date of awarding contract.

Payments will be made from the first to tenth of each month in the amount of 90 per cent. of the work on the building and materials on the job.

A deposit of \$25 will be required for a set of plans and specifications, which can be obtained from the architects, said amount to be refunded when drawings are returned in good order with bid on work.

GEORGE MCGEE,
Chairman Board of Trustees.

Bids close January 5, 1921.

Iron Lamp Posts

OFFICE OF SUPERINTENDENT OF LAMPS AND LIGHTING, CITY HALL.

Baltimore, Md., December 1, 1920.

Bids will be received in duplicate in sealed envelopes at the office of the City Register, City Hall, Baltimore, Md., until 11 o'clock A. M. Wednesday, January 5, 1921, addressed to the Board of Awards in care of the City Register, marked "Proposals for Plain and Ornamental Iron Lamp Posts."

Bids must be in accordance with the specifications and blueprints, to be had at the office of the Superintendent of Lamps and Lighting, Room 209, City Hall, Baltimore, Md.

A bond in the amount of the contract price will be required.

A certified check of the bidder on a clearing-house bank for one thousand (\$1000) dollars, made payable to the Mayor and City Council of Baltimore, must accompany each bid.

The Board of Awards reserves the right to reject any or all bids.

JOHN J. HANSON,
Superintendent of Lamps and Lighting.
APPROVED: December, 1920.
WM. F. BROENING,
President Board of Awards.
APPROVED: December, 1920.
FRANK DRISCOLL,
Assistant City Solicitor.



CLASSIFIED OPPORTUNITIES

MINERAL AND TIMBER LANDS, WATER POWERS, MISCELLANEOUS PROPERTIES

BONA-FIDE PURCHASERS in the market for coal lands, leases or going mines in Eastern Kentucky and West Virginia, or for oil and gas leases in either the Eastern or Western Kentucky oil fields within producing area, or production itself, will be given an opportunity to procure same upon dividend-paying basis. Only properties offered that will bear every inspection and at actual market prices—not inflated prices. N. P. Howard, Lexington, Ky.

I MAKE A SPECIALTY of leases, royalties, production, coal and timber lands and fluorspar properties in Kentucky. Have a fine tract of timber, with mills, etc. Also handle leases in Texas and Louisiana. E. D. Watkins, Oil Producer, Irvine, Ky.

ZINC PROPERTY

FLUORSPAR AND ZINC properties for sale or lease, including some developed, equipped and producing mines. Also have a few Kentucky oil leases. C. W. Haynes, Marion, Ky.

SAND AND GRAVEL PROPERTY

FOR SALE—SAND AND GRAVEL FARM. 28 acres, located 2½ miles of the city on National Highway, concrete road; inter-urban car line in front of property; has frontage of 1200 feet on A. C. L. Ry.; good 9-room house; large creek, which will furnish ample water for washing of sand and gravel; 4 acres underlaid with fine quality of stone; every facility at hand for handling and developing one of the best sand and gravel pits in this section. Price \$12,500. If you want a bargain, look this property over. Apply to W. I. Smith, Route 3, or R. Maury Young, Box 114, Petersburg, Va.

TALC DEPOSIT

THE OWNER of an extensive deposit of fine commercial talc on railroad will lease on tonnage basis. Address Industrial Agent, R. & C. Ry. Co., Carthage, N. C.

SILICA SAND**GLASS SAND FOR SALE.**

Unlimited deposit of silica sand suitable for manufacture of glass, etc. Analysis 99% silica. Located 20 miles from Baltimore City on deep water. Mining and shipping facilities most favorable. Will sell or lease on royalty. Apply W. E. Ferguson, 220 St. Paul St., Baltimore, Md.